DOCUMENT RESUME

ED 146 211 TM 006 602

AUTHOR	Tolicic, Ivan; Zorman, Leon
TITLE	Achievement and Personality Characteristics of School Children in Relation to Environment. Final Report.
INSTITUTION	Ljubljana Univ., Yugoslavia. Dept. of Psychology.
SPONS AGENCY	Institute of International Studies (DHEW/OE), Washington, D.C.
PUB DATE	Jun 77
CONTRACT	OEG-9-001001-827
NOTE	512p.
EDRS PRICE	MF-$1.00 HC-$27.45 Plus Postage.
DESCRIPTORS	Academic Achievement; Academic Aspiration; Comparative Analysis; Correlation; Cross Cultural Studies; Cultural Environment; *Culturally Disadvantaged; Educational Interest; Elementary Secondary Education; Family Environment; Grade 4; Grade 8; *Individual Characteristics; Intelligence; Occupational Aspiration; Personality; *Rural Urban Differences; Sex Differences; *Social Differences; *Socioeconomic Status; Study Habits
IDENTIFIERS	Peasants; *Yugoslavia (Slovenia)

ABSTRACT

The influences of the urban vs rural environment and socioeconomic status (SES) of the family on the child's success in school and on certain personality characteristics were examined. The urban sample included the children of professional, skilled, and unskilled workers from large and small towns. The rural sample consisted of 50% peasant and 50% "semi-peasant" families from two areas which differed in the proportion of peasant and "semi-peasant" population. This cross-sectional study consisted of pupils from the 4th grade (10-year-olds) and 8th grade (14-year-olds). The size and the level of urbanization of the towns did not significantly influence the pupils' achievement test scores and their personality characteristics. The pupils from peasant and semi-peasant areas also differed little in these respects. Large differences in achievement test scores, intellectual abilities, and occupational and educational aspirations were found between children in urban and rural areas. In towns, relatively large SES group differences were found in achievement test scores, intellectual abilities, occupational and educational aspirations. The differences in other personality characteristics were smaller or did not exist. SES group differences were somewhat reduced when the groups were formed of equally intelligent children. There were either small differences or no differences that were attributable to the child's sex. (Author/MV)

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FINAL REPORT

Contract No. OEG-9-001001-827

ACHIEVEMENT AND PERSONALITY CHARACTERISTICS OF SCHOOL CHILDREN IN RELATION TO ENVIRONMENT

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ACHIEVEMENT AND PERSONALITY CHARACTERISTICS OF SCHOOL CHILDREN IN RELATION TO ENVIRONMENT

Contract No. OEG-9-001001-827

Ivan Toličič and Leon Zorman

June 1977

The research reported herein was performed pursuant to a contract with the Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

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ACKNOWLEDGMENTS

The research project was carried out on a broad basis and required the collaboration of many schools and individuals. The Education Board of Slovenia showed understanding and recommended the schools selected, and enabled us to carry out the research program. The heads of schools and 4th and 8th grade teachers also helped us considerably by providing us with some data about the pupils and schools. In addition they enabled us to carry out the testing of the pupils in optimal conditions.

Pedagogical advisers and colleagues of the Slovene Education Board composed the achievement tests for the basic school subjects under our methodological supervision. The achievement tests for the 4th grade of the elementary school were composed by: Jelica Mesesnel for Slovene language, Anica Šoper for Mathematics, Pavla Zadobovšek for Social Studies and Ana Tomić for Natural Sciences. The achievement tests for the 8th grade were composed by: Marija Jalen for Slovene language, Marija Jemec and Branko Roblek for Mathematics, Milena Kos and Vitka Kolar for English language, Fausta Munih and Tomaž Weber for History and Anton Korenc for Biology. Later, with the collaboration of some other authors, these tests were somewhat improved and printed for use in schools.

Marijan Blejec, Professor at the Faculty of Economics in Ljubljana gave us valuable suggestions for selecting schools in Slovenia and making up an adequate sample of pupils. Vladimir Klemenčič, Professor and Director of the Institute of Geography at Ljubljana University prepared the demo-geographic and other data of the urban and rural areas which we needed in selecting the schools and pupils.

Drago Žagar, asistent in the Department of Educational

Psychology, made a valuable contribution to the entire research project. He assisted in composing the achievement tests and some other measurement devices, carried out the technical work of drawing up the sample, led certain organizational tasks before and after testing the pupils and helped to prepare data for the computer analysis.

The data were statistically analysed on a Cyber 72 computer at the Computer Center for Programmed Learning and Innovations in Natural Sciences in the Faculty of Natural Science and Technology in Ljubljana. The data processing was carried out by Branko Roblek, who also prepared some special programs for data analysis.

Particular care was taken so that the testing of the pupils was technically accurate. Quite a large number of Psychology students helped to test the pupils, prepare the data for statistical analysis, and carry out other technical tasks. It was only with their assistance that the project could be completed on time.

In the final stage of the research Ljubica Marjanovič also helped with some technical tasks in other to bring the project to a successful completion.

Both authors express their sincere gratitude to all the above-mentioned institutions and individuals.

Special recognition must be given to Anka Jančič-Satler for translating the research report into English and to Miss Margaret G. Davis, lector in the Department of English, for looking over the final manuscripts.

We wish to express our sincere appreciation to the United

States Government, to the Department of Health, Education, and Welfare in the Office of Education, for providing the financial support without which this study could not have been carried out. Similarly, we are indebted to the Research Council of Slovenia, which provided the necessary additional financial funds in order to complete the project.

Ivan Toličič
Leon Zorman

INTRODUCTION

SOCIO-ECONOMIC FACTORS AND THE ACADEMIC ACHIEVEMENT OF CHILDREN

Children's academic achievement used to be considered a result of their mental and physical abilities. Later it was established that social and cultural conditions also figure significantly in children's mental development and academic achievement. The social, economic and educational system as well as the values characteristic for a certain society should also be considered. A social system can try to reduce the differences existing among children born in different socio-economic and cultural conditions. We are thus left with the question whether the whole social system and its individual structures give all children, without regard to their social origin, equal chances for educational and personality development, or whether the situation of children from the middle and upper social strata is more advantageous. This system can, as a matter of fact, maintain or even deepen the differences determined by children's socio-economic environment. Societies with greater social discrimination are confronted with more severe problems of this kind. Furneaux (1961) found that in Great Britain the selection of students for admission to universities really begins when the children are born, for a child's academic history is strongly influenced by the social class into which he is born. Children from lower social strata are usually at a great disadvantage concerning academic achievement and occupational success. These problems, closely related to the socio-economic status of the family, have lately been one of the major topics both in research and in the literature.

Definition and role of socio-economic status

The criterion for stratification of people used to be prestige and respectability (Warner, 1941), while other authors defined it as a sense of belonging to a particular social stratum (Centers, 1949 and Converse, 1958). These authors asked people to place themselves in one of the suggested categories, which were later complemented with more objective measures, i.e. income level, degree of education and occupation. The occupation and education of parents were very often considered an extremely suitable criterion for defining socio-economic status (Warner, Mecker & Eels, 1960). This is also the most suitable criterion to apply in our social system, since in our self-governing socialist society classic social classes do not exist.

Research into the effects of SES has no considerable tradition. In USA these questions became the subject of more intensive research only after 1940, and particularly after 1950.

The research done in this field indicates that belonging to a certain social class influences the development of human personality and behavior. However, these mechanisms are not automatic; such a relationship can be discussed only in general. In all social strata, for instance, extremely intelligent children can be found, yet not in the same percentage. Overlapping is also a consequence of the fact that different strata can not be precisely defined with regard to the style and way of life and other criteria.

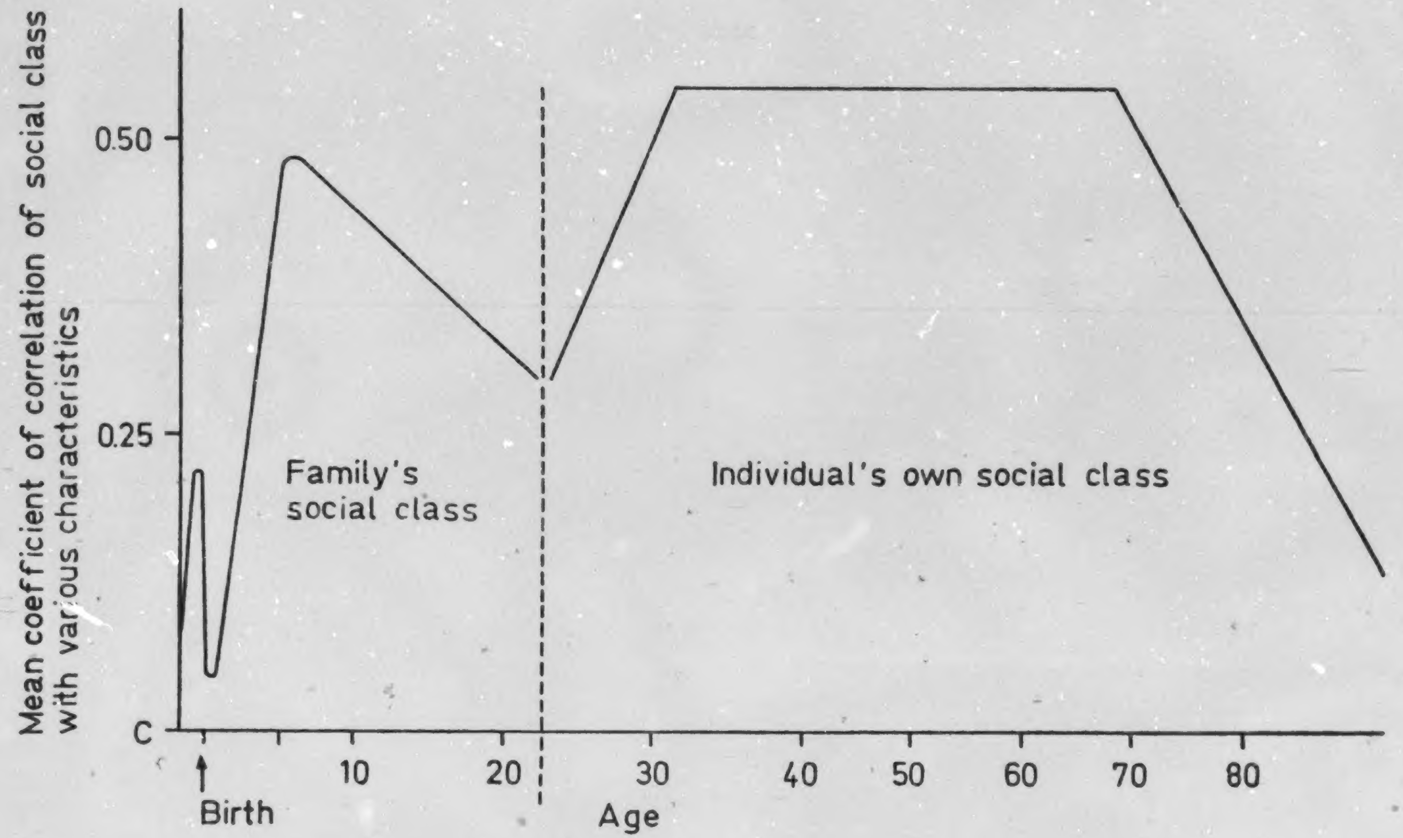
In studying these phenomena, many authors use SES and not the social stratum as a variable. In this way it is easier to process the data adequately.

In the western countries SES proved to be one of the significant predictors of children's academic achievement, their attitude towards work, values, careers, and their general orientation in life. Havighurst (1971) considered SES the most accurate predictor of children's academic achievement and their behavior, more accurate even than their IQ or any other personality characteristic. On the other hand this does not mean that an individual's career can be predicted on the basis of SES, since other factors, independent from SES must also be taken into consideration, particularly the person herself and his goals and activities.

The role of SES is not the same in all periods of life. Havighurst (1971, 112) presented this role graphically (page 4). The diagram indicates that SES is of little importance in the prenatal period and in the first six months of life. In these first months the baby is mainly dependent on food, the mother's and medical attention. Recent findings, however, (Kagan, 1971) have established some differences in social response even at six months. These differences are attributed to the interaction between mother and baby which can be different with regard to SES.

The role of SES in the period from six months up to six years increases rapidly. At this age, the development of the child's personality depends mainly on the family and its influences. The latter differ very much with regard to SES. Authors who deal with mental development in the pre-school period report that children from lower social strata develop somewhat more slowly and achieve lower mean scores on cognitive and some personality variables than their middle class age-mates. These differences can be reduced, however, if the children are given systematic pre-school education.

During the age of 6 to 25 years, that is in the period of compulsory and further education, the role of SES gradually decreases. As can be seen from the diagram, the effect of SES on the child's personality is greater in middle and late childhood while in the


Mean coefficient of correlation of social class with various characteristics
0.50
0.25
C
Family's social class
Individual's own social class
Birth
10
20
30
40
50
60
70
80
Age

period of adolescence it decreases considerably. These positive changes result from the influence of schooling, social contact with age-mates and active participation in different organizations, circles and associations. In this period the family still plays a rather important role, although not quite as important as earlier.

Havinghurst reports that the role of SES increases again after the age of 25 years and remains more or less the same during the period of occupational engagement until old age. After the age of 70 years people retire, their style of life changes and the role of SES decreases again.

As can be seen from the diagram, SES generally has a considerable predictive value for determining the course of life from early childhood until old age. However,the correlation coefficients for individual personality and behavior variables do not exceed r = .50. This means that SES represents the smaller part of variance (25% at the most), while the larger part of variance covers individual personality characteristics, relations between parents and children, activity in occupational career and in society, and social relations in general.

The role of SES in different periods of life, as presented in the diagram, is based on numerous studies, mainly carried out in the USA. Therefore, these findings are valid mostly for American or similar social conditions and cannot be transposed into our social environment. Our self-governing socialist society endeavors to lessen social differences among people and makes efforts towards providing all children, without regard to their social origin, with the same starting conditions. At this stage of our social and economic development, social differences between people still exist and they can influence children's mental development and mental achievement. In our country these influences have not yet been systematically examined although they are doubtless very important for the future development of our society. There exists only a limited number of partial researches which do not provide a complete picture of the effects of SES in our social conditions.

Socio-economic status and the child's cognitive development

Lately the old questions about the influence of genetics and environment on a child's intelectual development have arisen again. These questions used to be provided with rather extreme answers; the differences in human capabilities were sometimes explained solely by the effect of genetic factors, at other times only by environmental factors, where learning was of the greatest importance. These rather extreme ideas were dismissed by science a long time ago. In the last few decades several authors have reopened the discussion on these problems, trying to attribute more exactly the differences in intelligence in relation to variations between genetic and environmental factors.

In recent years (1969 and 1973), the American psychologist Jensen came to the conclusion that in variations of intelligence, genetic factors figure twice as much as do those of environment, prenatal influences included. He came to this conclusion on the basis of the research work of other authors who examined intelligence in relatives. All authors reported the highest correlation between identical twins (r = .90), followed by nonidentical twins of the same sex (r = .70) and nonidentical twins of different sex (r = .60), siblings (r = .50), first cousins (r = .27), while there was no correlation between unrelated children (r = .00). This kind of result, obtained by objective measurement, is used by nativists as the chief evidence of genetic influences. Such evidence does not, however, take into account any possible methodological shortcomings of these studies whose results depend very much on the type of tests used; the latter can cover very different aspects of intelligence. Besides, in these results the effects of both genetic and environmental factors are comprised. Hunt (1961) and many others are trying prove that intelligence develops under the influence of the dynamic interaction of genetics and environment and therefore this problem cannot be solved by means of existing intelligence tests and various statistical analyses. Determining the contribution of each factor is another difficult task, particularly as intelligence is a product of genetic and environmental factors and not their sum total. Besides, we should be well aware that intelligence tests cover only the phenotype, i.e. the totality of all the structures and functions that are the result of the interaction of genetic dispositions and environmental factors the person's own activity included. Because of the interaction of these factors it is not possible, not even in the case of twins, to determine precisely the contribution of genetic factors.

Jensen also refers to studies of whites and negroes in the USA which showed that black and white children differ in IQ for 1 SD on average, which makes about 15 IQ points. His interpretation is that these differences are genetically determined yet these is no scientific evidence to support this assumption. His conclusions lack consideration of the effects of environmental macrofactors producing differences in societal and cultural conditions that affect individual ethnic and racial groups within a certain time and place. It is well known that negroes in the USA have been living in far poorer soci-economic and cultural conditions than whites and therefore these differences should not be explained simply by genetics since such an explanation would fall short of some important factors and their substantial contribution.

As stated earlier, the contribution of genetics to the development of intelligence cannot be determined precisely. However, the role of genetics should be neither underestimated nor overestimated. Cronbach (1969, 197) believes that for practical educative endeavours there is no sense in discussing the role of genetics since it cannot be modified. The teacher, however, does have an opportunity to bring about changes, i.e. environmental changes within school.

It is regrettable that the effects of the environment in its diversity and its specific influences on a child's intellectual development and other personality characteristics have not yet been studied in detail.

Only lately various authors have made attempts to examine these effects more thoroughly. They are numerous and are in mutual dynamic interaction, which is also the reason why they can not be easily controlled. Due to the speed of social and economic development, the environment changes substantially, which demands new and extended research.

Some authors divided environment into specific variables and studied their relationship with the child's cognitive development. According to Wolf (1963), there are 13 variables of environment that play a particularly important role in this development. They are grouped as follows:

I. Press for achievement motivation

1. Nature of intellectual expectations of child.
2. Nature of intellectual aspirations for child.
3. Amount of information about child's intellectual development.
4. Nature of rewards for intellectual development.

II. Press for language development

5. Emphasis on use of language in a variety of situati-

ons.

6. Opportunities provided for enlarging vocabulary.
7. Emphasis on correctness of usage.
8. Quality of language models available.

III. Provision for general learning

9. Opportunities provided for learning in the home.
10. Opportunities provided for learning outside the home (excluding school).
11. Availability of learning supplies.
12. Availability of books (including reference works), periodicals, and library facilities.
13. Nature and amount of assistance provided to facilitate learning in a variety of situations.

The author studied the correlation between these environmental variables and the IQ of 5th grade children. A multiple correlation was calculated (R = .76). This correlation was much higher than correlations between individual environmental factors such as social status, occupation or education of parents.

The variables connected with the parents' wishes as to what their child should achieve (variables 1, 2, 3, 4, 9, 10, 13) correlate as high with the IQ of the children (R = .70) as those connected with more stable characteristics of parents and familial environment (variables 5, 6, 7, 8, 11, 12). Here it can be concluded that the aim and style of upbringing within the family, together with the studying facilities that the parents provide for their children, play a very important role in the children's intellectual and personality development. This group of variables is more easily controlled than the second group which comprises speech and language patterns that depend on the extent of cultural development in the child's environment and on his parents' education.

Bloom (1964) came to similar conclusions. He listed four specific factors which handicap children in a deprived environment:

1. Poor speech habits and language patterns in the home discourage language development and restrict the number and variety of words which the child recognizes; this in turn hinders his achievement in school particularly in fields where reading is assumed.

2. Children from a deprived environment have fewer experiences with the world around them. Parents have less time to spend with their children and they often lack the know-how of child rearing. The children get fewer contacts with the outside world through books, pictures, films etc. while in a rural environment there are also fewer possibilities for going to the cinema, exhibitions, attending cultural events etc. This type of deprivation hinders the child's intellectual development and his learning in general.

3. Children in these "disadvantaged" homes have fewer opportunities for solving problems or for thinking about a variety of issues, as compared with children in more abundant environments. Their parents do not have the habit of encouraging children to ask questions or to think things out for themselves.

4. There is less interaction generally between adults and children. Discipline tends to be authoritarian, and the "good" child is one who is quiet and out of the way. This, too, limits the background of experience and language which the child brings to school.

Linguistic differences among English children from the lower and middle classes were pointed out by Bernstein (1971). He established that environment, particularly familial, significantly, affects the child's linguistic development. These questions had of course been studied earlier as well; Bernstein, however, went further and determined the socio-linguistic differences between children from the middle and working classes. He differentiated elaborated (formal) and restricted (colloquial) language.

Characteristics of the restricted language used above all by children of unqualified workers, were the following:

1. Short, grammatically simple, often unfinished sentences, a poor syntactical construction with verbal forms stressing the active mood.
2. Simple and repetitive use of conjunctions (so, then, and, because).
3. Frequent use of short commands and questions.
4. Rigid and limited use of adjectives and adverbs.
5. Infrequent use of impersonal pronouns as subjects (one, it).
6. Statements formulated as implicit questions which set up a sympathetic circularity, e.g. "Just fancy?" "It's only natural, isn't it?" "I wouldn't have believed it."
7. A statement of fact is often used as both a reason and a conclusion, or more accurately, the reason and conclusion are confounded to produce a categoric statement, e.g. "Do as I tell you", "Hold on tight", "You're not going out", "Lay off that".
8. Individual selection from a group of idiomatic phrases will frequently be found.
9. Symbolism is of a low order of generality.
10. The individual qualification is implicit in the sentence structure, therefore it is a language of implicit meaning. It is believed that this fact determines the form of the language.

At the same time Bernstein describes the characteristics of formal language used largely by middle class parents and children. They are the following:

1. Accurate grammatical order and syntax regulate what is said.
2. Logical modifications and stress are mediated through a grammatically complex sentence construction, especially through the use of a range of conjunctions and relative clauses.
3. Frequent use of prepositions which indicate logical relationships as well as prepositions which indicate temporal and spatial contiquity.
4. Frequent use of impersonal pronouns (one, it).
5. A discriminative selection from a range of adjectives and adverbs.
6. Individual qualification is verbally mediated through the structure and relationships within and between sentences. That is, it is explicit.
7. Expressive symbolism conditioned by this linguistic from distributes affectual support rather than logical meaning to what is said.
8. A language use which points to the possibilities inherent in a complex conceptual hierarchy for the organizing of expericence.

Speech development in a child depends on the type of language used by his parents and on the way they encourage him to talk. Middle class parents usually have a richer vocabulary and pay more attention to the way the child expresses himself. In this way the child learns a more accomplished way of expressing himself which help him to understand and also differentiate more refined linguistic nuances.

Bernstein states that working class parents, particularly unqualified workers, use a poorer language, simpler and usually repetitive patterns of speech. Communication between parents and children is linguistically poorer and less frequent; parents express their demands with short, incomplete sentences and direct orders which is particularly typical of families where an authoritative type of education prevails.

For such families it is also characteristic that individual emotional expressions are conveyed to the child mostly by means of expressive symbols, that is by non-linguistic means, such as mimicking, gesticulation, the tone of voice etc. These expressions are thus not transferred with clear and differentiated verbal archetypes but are only implicitly conveyed. In this way the child does not get enough linguistic encouragement and so acquires a smaller vocabulary and a poorer syntax. The child is directed more to concrete objects and contents while his emotional and cognitive diferentiation remains in the background since he does not master suitable linguistic symbols. His symbols are in fact very general.

These linguistic shortcomings hinder the child's later academic achievement. The child who masters a modest colloquial language begins learning the formal language used by teachers only when he starts school. This makes the child's comprehension and communication with the teacher generally more difficult. Both the pupil and the teacher feel that they use different languages. The pupil does not comprehend everything and cannot follow logical operations or deduce necessary generalizations. A middle class child is in quite a different position. Before going to school he learns both colloquial and formal language and he not only understands them but can also differentiate and use them appropriately. This helps him with learning in school, in acquiring a system of notions and understanding of relations. A child who only masters a poor colloquial language is hindered not only in his linguistic, but also in his intellectual development. Such children usually receive lower scores on verbal intelligence tests than on nonverbal ones.

Bernstein's contribution is particularly noted in one respect. He paid attention to certain speech and linguistic differences among children from different social strata. These differences are not determined by social stratum alone, however, since substantial variations are observed also within each single stratum. Yet the socio-linguistic characteristics as described by Bernstein do play an important role in a child's intellectual and personality development and should be taken into consideration more than has been the case so far. Even though the origin of these differences is not perfectly clear they should not be neglected as these linguistic shortcomings can hinder a child considerably in his academic achievement.

This socio-linguistic finding ought not to be transposed automatically into another linguistic culture and another social system. Bernstein's findings may serve as an encouragement towards scrutinizing these problems which are probably present everywhere but in a different form and to a different extent. We too would need answers to such questions, particularly as we assume that there are considerable differences between urban and rural children in this respect.

In our country some aspects of the linguistic knowledge of ten-year-olds from different social groups were examined by O. Gnamuš (1975). She covered vocabulary, comprehension of conjunctions and complex composite sentences, knowledge of prepositions, reading comprehension and some syntactic capabilities of pupils. Her findings confirned that the children of parents who had completed secondary or university education had a significantly better linguistic knowledge than worker's children. These results, even though covering only a few components of a child's language, indicate that social factors, beginning with the parents' education, play an important role in a child's linguistic development.

In the USA, numerous authors have dealt with the relationship between the SES of the child's family and his intelligence during the schooling period. The correlations ranged mostly from .25 to .50, the majority covering the interval .35 to .40. The correlations were of course dependent upon the criteria for grouping families into socio-economic groups as well as on the types of intelligence tests used. Verbal tests usually correlate higher with SES than non-verbal ones.

Children from different SES groups obtain different mean scores on intelligence tests. Results from the USA and Great Britain indicate that the average IQ of unqualified workers' children is about 20 points lower in comparison with the IQ of children whose parents have university education and demanding occupations (Vernon, 1960, p. 142). The former usually stand .5 SD below the population average, while the latter stand 1 SD above it.

In our country (in Serbia) it was also found that intelligence test scores (a new Belgrade revision of the Binet-Simon scale) were closely related to the child's family.

For the purpose of standardizing the test, the authors (Ivič et al., 1976, pp. 113-115) also collected data on the parents' education. Incomparing the test results of children with their parents' education, considerable differences in IQ points were found. Children of those parents from town who did not complete elementary school obtained 95.5 IQ points on average, while their age-mates of parents who completed secondary or university education obtained on average of 116.8 IQ points. The difference between these two marginal groups of children thus amounts to 21 IQ points. These results are rather similar to those obtained by authors in other countries. The gap between the two groups which are farthest apart from the soci-economic standpoint is as large as to affect considerably the academic and occupational achievement of children.

Research carried out in Slovenia (Toličič, 1971) indicated that differences in intellectual abilities with regard to SES appear rather early. In testing school beginners it was found that children of parents with secondary or university education obtained rather higher mean scores in the "Test for School Beginners" that did their age-mates from families of qualified and unqualified workers. Children with more developed intellectual abilities are in a more favourable position right from the beginning of schooling and they do considerably better in school than those with lesser abilities. The results indicate that this state of affairs among SES groups is maintained in the later years of schooling as well.

Differences in intelligence with regard to SES were also examined in the international research project, Coping Styles and Achievement: A Cross-National Study of School Children (1972). The chief investigator was Robert Peck from Austin University (Texas). The research covered children from one or two towns in eight countries, namely Brasil, Mexico, Great Britain, Italy, West Germany, USA, Japan and Yugoslavia (Ljubljana).[1] In 1966, this research covered about 6,400 children, i.e. about 800 children per country; half of them were ten-year olds (4th grade pupils), the other half were fourteen-year olds (8th grade pupils). The research was repeated in 1969, covering altogether about 3,600 children. By means of this repeated research we wanted to check the stability of tendencies observed the first study.

The sample of children from each country covered two socio-economic groups which were called lower SES (the parents were qualified workers) and higher SES (the parents held occupations demanding completed secondary on university education).

Intellectual abilities were examined by means of a non-verbal test, namely Raven's matrixes which are used in practically all of the countries mentioned. The results are presented in Tabele 1.

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[1] The research done on our children was carried out by the authors of this publication.

TABLE 1: Intelligence - Raven test

	1966		1969	
	S E S		S E S	
	Upper-lower	Upper-middle	Upper-lower	Upper-middle
USA-Chicago	-.5	.5	-.4	.4
USA-Austin	-.3	.3	-.4	.2
Mexico	-.4	.4	-.4	.4
Brasil	-.2	.2	-.1	.1
Japan	-.3	.3	-.2	.3
G. Britain	-.2	.2	-.3	.2
W. Germany			-.2	.3
Italy	-.2	.2	-.2	.2
Yugoslavia-Slovenia	-.1	.1	-.2	.2

The table presents differences between means in z-scores with regard to socio-economic status (SES) for each country.

The greatest differences between the mean scores in both SES groups were found in children from the USA (Chicago) and Mexico, while the smallest differences were found in our country and in Brasilia.

The differences between the SES groups range from .2 (Slovenia in 1966, Brasilia in 1969) up to 1.0 SD (the USA, Chicago in 1966). There are also big differences between Mexican children, these being .8 SD (in 1966 and 1969). These differences between the SES groups are generally much smaller as compared to those mentioned above (Vernon, 1960). This is quite understandable, since this international project dealt only with similar SES groups, omitting those groups which are furthest apart. As can be seen, the differences between the SES groups differ noticeably from country to country. It is possible that the differences between the results in different countries can partly be a consequence of sampling. Yet the results invariably indicate that children from a higher SES obtain higher scores on intelligence tests than those from a lower SES, a finding valid for all countries. The degree of variability, however, also depends on the type of existing society, the aspirations of parents and children and the system of schooling. Because of different social and cultural conditions, these effects of course cannot be differentiated precisely.

The problem of the effects of environmental factors on a child's cognitive development at various ages is particularly noteworthy. The most interesting answers to those questions were obtained by longitudinal studies whose results were critically evaluated by B. Bloom (1964). He came to some new conclusions based mainly on the studies of Bayley and others who studied child development from birth to 18 years. Bayley used five different intelligence tests, suitable for different age groups. She was interested in the correlations between the results of intelligence tests at different ages and results with the same persons at the age 17. These correlations are presented in the following Table (Bloom, 1964, p. 57 and 61):

$r_1 \times 17 = .00$
$r_2 \times 17 = .41$
$r_3 \times 17 = .65$
$r_4 \times 17 = .71$
$r_5 \times 17 = .80$
$r_8 \times 17 = .90$
$r_{11} \times 17 = .92$

Calculating the determination coefficient Bloom obtained the percentage of intelligence developed at a certain age as compared with the intelligence developed at age 17. Thus he came to the conclusion that a 4-year-old child has developed 50,3% of his intelligence (with regard to that developed by age 17), an 8-year-old has developed 81% and an 11-year-old even 84,5% of intelligence.

On the basis of these findings Bloom (164, p. 68) made his generalisation that the child develops 50% of his intelligence in the first four years of life, the following 30% from 4 to 8 years and the remaining 20% up to the age of 17.

Thus it can be concluded that a child's intelligence depends mainly on the extent to which it was developed up to his fourth year. Between the age four and eight it is still possible to influence the development of intelligence yet the effects are weaker. Between the 8th and 17th year, as stated by Bloom, very little can be done to promote this development.

It is our belief that these conclusions, readily cited by numerous authors, should be considered with a certain reserve. The correlations obtained obviously depend on the type of tests used. In the results presented, Bayley used the Stanford-Binet intelligence test as the criterium for 17-year-olds. Most items of this test are verbal. Correlating the results of the same persons at different ages with their achievements at age 18, this time with the Wechsler-Bellevue test which comprises verbal and non-verbal tests, she obtained different results (Bayley, 1955). The correlations of these same persons' results at ages 4, 7, 9 and 11 with their achievements at age 18 are the following:

r_4 x 18 = .52 r_9 x 18 = .80
r_7 x 18 = .68 r_{11} x 18 = .87

If determination coefficients are found it can be seen that children at age 4 have developed 27.0% of intelligence, 46.2% at age 7, 64% at age 9 and 75.7% at age 11 compared with the intelligence developed at age 18. In this case, four-year-olds can be said to have developed only about 25% of the intelligence as compared to that developed in the following 14 years. Children reach 50% of their mature intelligence at about age 7 or 8 and 75% of it at age 11.

Considering the arguments stated, Bloom's conclusions can not be readily accepted. As opposed to Bloom, who believes that 50% of a child's mature intelligence is developed by the age of 4, we find it more probable that this stage is reached about the age of 7 or 8. In certain cases a child can reach this stage even later, particularly if he moves from a less encouraging environment to a more encouraging one.

Findings reported by Thurstone (1955) concerning the development of specific mental abilities are also interesting. On a basis of a cross-sectional study of a large groups of children aged 5 to 19 he found that no factor from his series (PMA) was 50% developed before the age of 7. These results are presented in Table 2 (Bloom, 1964, p. 86):

TABLE 2

Primary abilities	Percent of development at different ages	
	50%	80%
P = Perceptual speed	7; 3	12
S = Space factor	9; 1	14
R = Reasoning	7; 10	14
N = Number factor	9; 5	16
M = Memory	10	16
V = Verbal comprehension	10	18
W = Word fluency	13; 3	after 20

From Table 2 it can be seen that perceptual speed factor and reasoning factors reach 80% of adult performance between age 7 and 8 while other specific mental abilities such as space and number factors, memory and verbal comprehension reach 50% of adult performance between age 9 and 10. The only exception is word fluency factor which reaches 50% of adult performance not before the child is 13 or 14 years of age.

Considering the different aspects of intelligence as described by Thurstone, it is evident that the intensive development of specific abilities does not take place only in early childhood but also in middle or even late childhood. This development also takes place in the adolescent period, yet not as intensively as in childhood.

In conclusion it can be stated that a certain degree of caution is called for when discussing the development of intelligence at different ages since not only the tests applied are to be considered but also different aspects of intelligence. Even though these questions have not yet been worked out in detail, the results obtained are grounds enough to believe that a child's intelligence develops most intensively from the age of 2 till about 9 or 10. In this period of rapid changes in the child's intellectual development, environment plays a very important role. If during this time a child lives in an environment that does not provide enough stimulation, he will later not be able to develop his abilities in an optimal way.

Bloom also analyses some results of other authors concerning identical twins who grew up in very different environments. In such a case, the difference between the twins was about 20 IQ points. On the basis of these and additional results he made conclusions about hypothetical influences of different environments on the development of intelligence. He believes that under the influence of an abundant or deprived environment a child's IQ may vary for 20 points. In accordance with his previous conclusions about accelerated development of intelligence in early childhood, he predicted effects as presented on Table 3 (Bloom, 1964, p. 72):

TABLE 3

Age period	Percent of Mature Intelligence	Variation from Normal Growth in IQ Units			
		Deprived	Normal	Abundant	Abundant Deprived
Birth - 4	50	- 5	0	+ 5	10
4 - 8	30	- 3	0	+ 3	6
8 - 17	20	- 2	0	+ 2	4
Total	100	-10	0	+10	20

On the basis of these data Bloom makes his main hypothesis that an extreme environment (either abundant or deprived) has a considerably greater effect in the early years of life than later. That is to say, deprivation in the first four years of life is much more critical than deprivation from the age 8 to 17. This assumption is based on his former statement about 50% of a child's intelligence being developed by the age of 4. We cannot accept this statement since it is our opinion that substantial changes in IQ are possible up to the age of 9 or 10 and in certain circumstances even later than that.

On the other hand, Bloom's conclusions must not be misunderstood; any child's IQ cannot vary by 20 points. This is only the case of a child moved from a very deprived to a very aboundant environment. However, as changes in the environment are usually not drastic, changes in children's IQ are is most cases small but they can take place in either direction.

Interesting results concerning this problem were obtained by Husén (1951) in Sweden. He tested the intelligence of 4th grade pupils at the end of their school year. Two equally intelligent groups were formed; pupils of one group continued their schooling in the elementary school and later took different jobs while the other group enrolled in high school and sat for and passed final examinations. After several years these same people were tested again with the same intelligence test. In the latter group, an improvement of 11 IQ points on average was recorded while in the former group there was no improvement in this sense. Even though these results should not be taken at face value, they indicate that a thorough long-term education can have positive effects on intelligence even after the age of 10.

Socio-economic status and the academic achievement of children

Most of the systematic research work into the relationship between SES and the academic achievement of children was carried out in the last two decades. In became evident that social and cultural factors can encourage or discourage children's academic achievement. Fraser (1959) studied these questions on a sample of 12-year-olds from Aberdeen. She found out that there was a correlation of .44 between the index of income per family member and the children's school achievement. There was a similar correlation between the parents' education and the children's school achievement amounting to .49. Other authors, however, obtained lower correlations. In the USA, Mollenkopf (1956) calculated correlations between SES and various variables of academic achievement; they ranged from .17 to .31. In Ljubljana (Toličič, 1970), the correlation obtained between the index of income per family member and grade point average on the basic subjects of 3rd grade pupils was .30. In Sarajevo, (Adžibaba-Gajanović, 1975), the correlation obtained between the father's occupation and Grade point average of 8th grade pupils was .35, while the correlation between the mother's occupation and Grade point average was .36. This indicates that a better education of the parents has a positive effect on the children's academic achievement. Yet these correlations are not high, which means that other factors also figure greatly in the school achievement of children.

These questions have also been studied througly in the above-mentioned cross-national research.[1]

TABLE 4: Reading achievement

	1966		1969	
	SES		SES	
	Upper-lower	Upper-middle	Upper-lower	Upper-middle
USA-Chicago	-.3	.3		
USA-Austin	-.4	.4	-.4	.3
Mexico	-.4	.4	-.4	.4
Brasil	-.2	.2	-.4	.4
Japan	-.4	.4	-.4	.5
G. Britain	-.3	.3	-.4	.3
W. Germany			-.3	.3
Italy	-.2	.2	-.4	.4
Yugoslavia-Slovenia	-.2	.2	-.3	.2

The results presented in Table 4 indicate that in all countries the children from a higher SES read better than children from a lower SES. There are slight differences between the first and second testing which is probably a consequence of sampling;

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[1] Coping Styles and Achievement: A Cross-National Study of School Children.

the smallest difference is in Yugoslav children (.4 SD and .5 SD) and the largest in Japanese children (.8 SD and .9 SD).

TABLE 5: Mathematics achievement test

	1966		1969	
	SES		SES	
	Upper-lower	Upper-middle	Upper-lower	Upper-middle
USA-Chicago	-.2	.2		
USA-Austin	-.4	.4	-.3	.1
Mexico	-.5	.5	-.3	.3
Brasil	-.1	.1	-.1	.1
Japan	-.3	.3	-.4	.5
G. Britain	-.3	.3	-.3	.3
W. Germany			-.1	.1
Italy	-.2	.2	-.2	.2
Yugoslavia-Slovenia	-.2	.2	-.2	.2

The results presented in Table 5 indicate that in all countries children from a higher SES obtained higher scores in the Mathematics achievement test than children from a lower SES. The differences between countries are rather large; the largest are observed in children from Mexico (1.0 SD and .6 SD) and Japan (.6 SD and .9 SD) while the smallest appear in children from Brasil (.2 SD and .2 SD) and West Germany (.2 SD). In Yugoslav children, the differences between the two SES groups are medium (.4 SD and .4 SD).

TABLE 6: Grade point average

	1966		1969	
	SES		SES	
	Upper-lower	Upper-middle	Upper-lower	Upper-middle
USA-Chicago	-.3	.2	-.0	.1
USA-Austin	-.3	.3	-.4	.2
Mexico	-.2	.2	-.4	.4
Brasil	-.1	.1	.1	-.1
Japan	-.3	.3	-.3	.5
G. Britain	-.3	.3	-.2	.3
W. Germany			-.1	.0
Italy	-.2	.2	-.3	.3
Yugoslavia-Slovenia	-.03	.3	-.3	.4

Children from a higher SES have a higher Grade point average than those from a lower SES (Table 6). It is interesting, however, that in the second testing Brasilian children from a lower SES had a higher Grade point average than those from a higher SES. The smallest differences are observed in children from West Germany (.1 SD) and Brasil (.2 SD and .2 SD), while the largest appear in children from Japan (.6 SD and .8 SD) and Yugoslavia (.6 SD and .7 SD).

From the results of this cross-national study it can be concluded that the children of parents with a better education and a more favourable occupation generally do better in school than qualified workers' children. This can be considered a general tendency as it appeared in all the countries involved. The differences between countries, however, are more difficult to explain because of the variability of societal and educational factors.

In Yugoslavia, there are smaller differences in the socio-economic conditions in which children live than is the case with other countries. Apart from that, we have standard curriculum elementary schools which are compulsory for all children. Therefore it was expected that differences in academic achievement would be smaller than elsewhere. This was confirmed in the case of non-verbal intelligence tests, in reading achievement and partly in the Mathematics achievement test, while the differences between our children's school marks and their achievement test results were larger which was rather a surprise for us. In other countries, the differences in school marks with regard to SES are equal or smaller than those in achievement tests.

Another interesting question is whether SES correlates higher with children's academic achievement or with their intelligence. Authors often obtained somewhat higher correlations between SES and academic achievement than between SES and non-verbal intelligence tests. If verbal intelligence tests are used, however, the correlation obtained will usually be higher, i.e. approximately the same as that with academic achievement.

The role of intelligence should certainly be considered when discussing the relationship between SES and academic achievement since it is obvious that a great deal of variance in academic achievement is determined by it. Some authors therefore studied this relationship by checking intelligence; yet equally intelligent children from different SES still differed in academic achievement. The interpretation of such results, however, calls for careful consideration. Simons (1973, p. 262) has established that such results may well be a consequence of the choice of test. A test that correlates highly both with SES and academic achievement will indicate a weak relationship between these two if the intelligence factor is abstracted. And vice versa: an intelligence test that correlates low with SES and higher with academic achievement will indicate a considerable relationship between SES and school achievement even if the intelligence factor is abstracted. The author gives the following illustration: the correlation between SES and school marks in the mother tongue (German) is r = .44. A vocabulary test from the PMA series (Thurstone) correlates with SES r = .45 and with the mark in the mother tongue r = .58. If by means of partial correlation the effect of intelligence is eliminated from the correlation between SES and the teachers' mark in the mother tongue, this correlation decreases substantially: r = .25. It is still statistically significant but it does not have so much bearing any longer. Here it can be concluded that the role of SES, if abstracting intelligence, is relatively small. If a non-verbal test from the same PMA series is used, however, a different picture emerges. The test correlates with SES r = .23 and with the school mark in the mother tongue r = .45. If the effect of non-verbal intelligence is abstracted, the correlation decreases from .44 to .39. This is of course only a small difference which indicates that the achievement in the mother tongue depends very much on the SES of the child's family. Therefore, when interpreting the effects of SES on children's academic achievement, both intelligence and the particular field of intelligence that is covered by the test used should be taken into consideration.

There are very interesting studies that examine different variables of SES like parents' occupation, parents' education, parents' income, and also other factors of familial environment. The latter are also related to SES while at the same time they affect variability within SES. These variables, if included in the total index of the familial environment, produce an increase in the correlation with the academic achievement of children. A study of this kind was carried out by Dave (1963) on a sample of 10-year-olds. He divided the role that the familial environment plays in children's academic achievement, into 6 variables:

1. Achievement press
2. Language models in the home
3. Academic guidance provided in the home
4. The stimulation provided in the home to explore various aspects of the larger environment
5. The intellectual interests and activity in the home
6. The work habits emphasized in the home.

The total result of these variables correlated with academic achievement (a series of achievement tests) R = .80. Here it is interesting that the family variables correlated higher with tests that covered vocabulary and reading than with tests on mathematics achievement and other skills. Thus it can be concluded again that the familial environment affects mainly the children's linguistic development. The study also indicated that parents with lesser education and a lower SES can also create an academically very stimulating atmosphere in the family. Studying the specific relations within the family is a very important and interesting task but since it was not included in the scope of our research we cannot present any results on this matter.

THE PROBLEM OF THE RESEARCH

It has been established that the social and cultural environment in connection with familial conditions play an important role in a child's academic achievement and in the development of his personality characteristics. Of course, social conditions and the general educational system should be considered when discussing these effects, for greater differences in socio-economic and cultural conditions can be expected to produce greater differences in children's cognitive and personality development. Our society is certainly interested to obtain an insight into the state of these affairs in our country. We have not yet done much systematic and representative research in this field. However, some partial studies that have been carried out indicate that even in our country where class differences have been abolished, socio-economic and environmental factors still figure rather strongly in the development of intelectual abilities, and other personality characteristics as well as in the academic achievement of our children.

These questions are of rather great importance for our society as we are trying to provide all children with the necessary basic education as a condition for further schooling and a successful start in later occupational and social activities. Our efforts, however, are still being hindered by the socio-economic and cultural differences in children's environments; these differences are particularly notable when comparing urban and rural areas. The main problem of our research is therefore the question what differences appear between urban and rural children in academic achievement, intellectual abilities, occupational and educational aspirations, study habits, style of learning and some other personality characteristics. Our hypotheses assumed that children from urban and culturally more developed environments would do better in school and also differ from their country age-mates in personality characteristics.

The parents of one half of the children from the rural sample were peasants while the other half were people who owned farms but one of the parents was employed as a worker outside the farm which is rather characteristic of the present state of affairs in our countryside. We believed that, considering similar occupational activities, this sample could be compared only with children of qualified and unqualified town workers and therefore children of professional workers were excluded from this comparison. The differences obtained could thus be attributed to demo-geographic factors and varying degrees of urbanisation of the environment. Studies dealing with differences between urban and rural children usually do not consider this. In such cases the differences obtained are more a reflection of the socio-economic status of the child's family than the effect of varying degrees of environmental urbanisation.

We were also interested to find out whether there would be any differences between children from larger and smaller towns. The categorization and selection of towns are presented in detail in the following chapter. Our hypothesis was based on the assumption that children from larger towns would do better in school, have more developed intellectual abilities, higher occupational and educational aspirations, better study habits and style of learning and would also differ in other personality characteristics from children from smaller towns. We presumed that larger, economically and culturally more developed towns provide children with better possibilities for favourable development and more suitable encouragement towards it. Smaller towns have fewer cultural institutions and are in this respect dependent on the nearest large town.

As to the rural sample, we were particularly interested to find out whether there would be any differences between children from peasant and semi-peasant areas as indicated in the sample description. Considering the demo-geographic differences we expected that children from semi-peasant areas would excel both in academic achievement and in other variables examined.

The second main problem of our research is the question whether there are any differences in academic achievement and the other mentioned characteristics between children from families with a different SES. Previous by it was established that SES plays an important role in the whole development of a child's personality.

Divisions into classes and strata as used in western countries are not applicable in our country. Here, socio-economic differences are based solely upon work; more demanding and responsible jobs that require more education are better paid than simple and less responsible jobs. Therefore, the criterion for our classification was the ecudation and occupation of the parents. Town children were divided into three groups with regard to their parents' occupation. The first group covered children whose parents (father) had complete secondary or university education and held occupations from this range. These parents were called professional workers and the group was marked "P". The second group covered children whose parents were sufficiently educated to be qualified workers and held an occupation from this range; this group was marked "Q". The third group, marked "U" comprised children of unqualified workers.

Our hypothesis assumed that in the variables examined there would be differences among children with regard to SES. The higher the SES of the family, the more successful the children would be in school, they would have more developed intellectual abilities, higher occupational and educational aspirations, better study habits and style of learning and would also differ in other personality characteristics from children from a lower SES.

We were particularly interested to find out what differences would appear in academic achievement and other personality characteristics among children if the intelligence factor were abstracted. The research done so far has indicated that children from different SES differ in intelligence which is very much the reason for variability in their academic achievement. It is well known that children from a higher SES do better in school than children from a lower SES, but it is usually not possible from such research work to determine how much SES contributes to these differences and how much they are determined by intelligence, since children from a higher SES obtain higher scores in intelligence tests than do children from a lower SES. Therefore we tried in our research to find out what the differences are in academic achievement and other characteristics among children from different SES if the intelligence factor is controlled.

This problem was examined on a sample of town children. We expected that, even though equally intelligent, they would differ with regard to SES. The higher the SES of the family, the more successful they would be expected to be in school, they would have higher occupational and educational aspirations, better study habits and style of learning and would also differ in other personality characteristics.

We were also interested to find out any possible differences in academic achievement and other characteristics between boys and girls. This problem was also examined on a sample of town children that covered a large enough number of persons and at the same time all three SES groups from large and small towns. Our hypothesis assumed that boys and girls would differ neither in academic achievement nor in the other characteristics examined. This assumption was based on the fact that our children are co-educated and that in our society men and women have equal chances for education and occupational career.

OPERATIVE HYPOTHESES

Hypotheses for 4th grade pupils (Ten-year-olds)

1. Differences between children from large (T-1) and small towns (T-2 and T-3)

1.1. T-1 children will obtain higher scores on a reading test and achievement tests on different school subjects than T-2 children who will do better in this respect than T-3 children.

1.2. T-1 children will have higher school marks at the end of the schoolyear than T-2 children who will do better in this respect than T-3 children.

1.3. T-1 children will obtain higher scores on a non-verbal intelligence test than T-2 children who will do better in this respect than T-3 children.

1.4. T-1 children will have higher occupational aspirations and occupational expectations than T-2 children who will do better in this respect than T-3 children.

1.5. T-1 children will have higher educational aspirations than T-2 children who will do better in this respect than T-3 children.

1.6. T-1 children will have better study habits than T-2 children who will do better in this respect than T-3 children.

1.7. T-1 children will have a better style of learning than T-2 children who will do better in this respect than T-3 children.

1.8. T-1 children will differ in sociability from T-2 children who will differ in this respect from T-3 children.

1.9. T-1 children will differ in agression from T-2 children who will differ in this respect from T-3 children.

1.10. T-1 children will differ in restlessness from T-2 children who will differ in this respect from T-3 children.

1.11. T-1 children will differ in anxiety from T-2 children who will differ in this respect from T-3 children.

1.12. T-1 children will differ in neurotic symptoms from T-2 children who will differ in this respect from T-3 children.

2. Differences between children from semi-peasant (R-1)and peasant agreas (R-2)

2.1. R-1 chilldren will obtain higher scores on a reading test and achievement tests on different school subjects than R-2 children.

2.2. R-1 children will have higher school marks at the end of the schoolyear than R-2 children.

2.3. R-1 children will obtain higher scores on a non-verbal intelligence test than R-2 children.

2.4. R-1 children will have higher occupational aspirations and occupational expectations than R-2 children.

2.5. R-1 children will have higher educational aspirations than R-2 children.

2.6. R-1 children will have better study habits than R-2 children.

2.7. R-1 children will have a better style of learning than R-2 children.

2.8. R-1 children will differ from R-2 children in sociability.

2.9. R-1 children will differ from R-2 children in agression.

2.10. R-1 children will differ from R-2 children in restlessness.

2.11. R-1 children will differ from R-2 children in anxiety.

2.12. R-1 children will differ from R-2 children in neurotic symptoms.

3. Differences between urban children from families of unqualified and qualified workers and rural children

3.1. Urban children of a) unqualified and b) qualified workers will obtain higher scores on a reading test and achievement tests on different school subjects than rural children.

3.2. Urban children of a) unqualified and b) qualified workers will have higher school marks at the end of the school year than rural children.

3.3. Urban children of a) unqualified and b) qualified workers will obtain higher scores on a non-verbal intelligence test than rural children.

3.4. Urban children of a) unqualified and b) qualified workers will have higher occupational aspirations and occupational expectations than rural children.

3.5. Urban children of a) unqualified and b) qualified workers will have higher educational aspirations than rural children.

3.6. Urban children of a) unqualified and b) qualified workers will have a better study habits than rural children.

3.7. Urban children of a) unqualified and b) qualified workers will have a better style of learning than rural children.

3.8. Urban children of a) unqualified and b) qualified workers will differ in sociability from rural children.

3.9. Urban children of a) unqualified and b) qualified workers will differ in agression from rural children.

3.10. Urban children of a) unqualified and b) qualified workers will differ in restlessness from rural children.

3.11. Urban children of a) unqualified and b) qualified workers will differ in anxiety from rural children.

3.12. Urban children of a) unqualified and b) qualified workers will differ in neurotic symptoms from rural children.

4. Differences among urban children with regard to socio-economic status of the family

4.1. Professional workers' children will obtain higher scores on a reading test and achievement tests on different school subjects than qualified workers' children who will do better in this respect than unqualified workers' children.

4.2. Professional workers' children will have higher school marks at the end of the schoolyear than qualifies workers' children who will do better in this respect than unqualified workers' children.

4.3. Professional workers' children will obtain higher scores on a non-verbal intelligence test than qualified workers' children who will do better in this respect than unqualified workers' children.

4.4. Professional workers' children will have higher occupational aspirations and occupational ecpectations than qualified workers' children who will do better in this respect than unqualified workers' children.

4.5. Professional workers' children will have higher educational aspirations than qualified workers' children who will do better in this respect than unqualified workers' children.

4.6. Professional workers' children will have better study habits than qualified workers' children who will do better in this respect than unqualified workers' children.

4.7. Professional workers' children will have a better style of learning than qualified workers' children who will do better in this respect than unqualified workers' children.

4.8. Professional workers' children will differ in sociability from qualified workers' children who will differ in this respect from unqualified workers' children.

4.9. Professional workers' children will differ in agression from qualified workers' children who will differ in this respect from unqualified workers' children.

4.10. Professional workers' children will differ in restlessness from qualified workers' children who will differ in this respect from unqualified workers' children.

4.11. Professional workers' children will differ in anxiety from qualified workers' children who will differ in this respect from unqualified workers' children.

4.12. Professional workers' children will differ in neurotic symptoms from qualified workers' children who will differ in this respect from unqualified workers' children.

5. Differences between equally intelligent children from different SES groups

5.1.1. Professional workers' children will obtain higher scores on a reading test and achievement tests on different school subjects than unqualified workers' children.

5.1.2. Professional workers' children will obtain higher scores on a reading test and achievement tests on different school subjects than qualified workers' children.

5.1.3. Qualified workers' children will obtain higher scores on a reading test and achievement tests on different school subjects than unqualified workers' children.

5.2.1. Professional workers' children will have higher school marks at the end of the schoolyear than unqualified workers' children.

5.2.2. Professional workers' children will have higher school marks at the end of the schoolyear than qualified workers' children.

5.2.3. Qualified workers' children will have higher school marks at the end of the schoolyear than unqualified workers' children.

5.3.1. Professional workers' children will have higher occupational aspirations and occupational expectations than unqualified workers' children.

5.3.2. Professional workers' children will have higher occupational aspirations and occupational expectations than qualified workers' children.

5.3.3. Qualified workers' children will have higher occupational aspirations and occupational expectations than unqualified workers' children.

5.4.1. Professional workers' children will have higher educational aspirations than unqualified workers' children.

5.4.2. Professional workers' children will have higher educational aspirations than qualified workers' children.

5.4.3. Qualified workers' children will have higher educational aspirations than unqualified workers' children.

5.5.1. Professional workers' children will have better study habits than unqualified workers' children.

5.5.2. Professional workers' children will have better study habits than qualified workers' children.

5.5.3. Qualified workers' children will have better study habits than unqualified workers' children.

5.6.1. Professional workers' children will have a better style of learning than unqualified workers' children.

5.6.2. Professional workers' children will have a better style of learning than qualified workers' children.

5.6.3. Qualified workers' children will have a better style of learning than unqualified workers' children.

5.7.1. Professional workers' children will differ in sociability from unqualified workers' children.

5.7.2. Professional workers' children will differ in sociability from qualified workers' children.

5.7.3. Qualified workers' children will differ in sociability from unqualified workers' children.

5.8.1. Professional workers' children will differ in agression from unqualified workers' children.

5.8.2. Professional workers' children will differ in agression from qualified workers' children.

5.8.3. Qualified workers' children will differ in agression from unqualified workers' children.

5.9.1. Professional workers' children will differ in restlessness from unqualified workers' children.

5.9.2. Professional workers' children will differ in restlessness from qualified workers' children.

5.9.3. Qualified workers' children will differ in restlessness from unqualified workers' children.

5.10.1. Professional workers' children will differ in anxiety from unqualified workers' children.

5.10.2. Professional workers' children will differ in anxiety from qualified workers' children.

5.10.3. Qualified workers' children will differ in anxiety from unqualified workers' children.

5.11.1. Professional workers' children will differ in neurotic symptoms from unqualified workers' children.

5.11.2. Professional workers' children will differ in neurotic symptoms from qualified workers' children.

5.11.3. Qualified workers' children will differ in neurotic symptoms from unqualified workers' children.

6. Differences between boys and girls

6.1. Boys and girls will obtain equal scores on a reading test and achievement tests on different school subjects.

6.2. Boys and girls will have equal school marks at the end of the schoolyear.

6.3. Boys and girls will obtain equal scores on a non-verbal intelligence test.

6.4. Boys and girls will have equal occupational aspirations and occupational expectations.

6.5. Boys and girls will have equal educational aspirations.

6.6. Boys and girls will have equal study habits.

6.7. Boys and girls will have an equal style of learning.

6.8. Boys and girls will not differ in sociability.

6.9. Boys and girls will not differ in agression.

6.10. Boys and girls will not differ in restlessness.

6.11. Boys and girls will not differ in anxiety.

6.12. Boys and girls will not differ in neurotic symptoms.

Hypotheses for 8th grade pupils (Fourteen-year-olds)

7. Differences between children from large (T-1) and small towns (T-2 and T-3)

7.1. T-1 children will obtain higher scores on a reading test and achievement tests on different school subjects than T-2 children who will do better in this respect than T-3 children.

7.2. T-1 children will have higher school marks at the end of the schoolyear than T-2 children who will do better in this respect than T-3 children.

7.3. T-1 children will obtain higher scores on a non-verbal intelligence test than T-2 children who will do better in this respect than T-3 children.

7.4. T-1 children will have higher occupational aspirations and occupational expectations than T-2 children who will do better in this respect than T-3 children.

7.5. T-1 children will have higher educational aspirations than T-2 children who will do better in this respect than T-3 children.

7.6. T-1 children will have better study habits than T-2 children who will do better in this respect than T-3 children.

7.7. T-1 children will have a better style of learning than T-2 children who will do better in this respect than T-3 children.

7.8. T-1 children will differ in sociability from T-2 children who will differ in this respect from T-3 children.

7.9. T-1 children will differ in concern about social relations from T-2 children who will differ in this respect from T-3 children.

7.10. T-1 children will differ in agression from T-2 children who will differ in this respect from T-3 children.

7.11. T-1 children will differ in restlessness from T-2 children who will differ in this respect from T-3 children.

7.12. T-1 children will differ in anxiety from T-2 children who will differ in this respect from T-3 children.

7.13. T-1 children will differ in neurotic symptoms from T-2 children who will differ in this respect from T-3 children.

7.14. T-1 children will differ in the concern about psychosomatic troubles from T-2 children who will differ in this respect from T-3 children.

8. Differences between children from semi-peasant (R-1) and peasant areas (R-2)

8.1. R-1 children will obtain higher scores on a reading test and achievement tests on individual school subjects than R-2 children.

8.2. R-1 children will have higher school marks at the end of the schoolyear than R-2 children.

8.3. R-1 children will obtain higher scores on a non-verbal intelligence test than R-2 children.

8.4. R-1 children will have higher occupational aspirations and occupational expectations than R-2 children.

8.5. R-1 children will have higher educational aspirations than R-2 children.

8.6. R-1 children will have better study habits than R-2 children.

8.7. R-1 children will have a better style of learning than R-2 children.

8.8. R-1 children will differ in sociability from R-2 children.

8.9. R-1 children will differ in the concern about social relations from R-2 children.

8.10. R-1 children will differ in agression from R-2 children.

8.11. R-1 children will differ in restlessness from R-2 children.

8.12. R-1 children will differ in anxiety from R-2 children.

8.13. R-1 children will differ in neurotic symptoms from R-2 children.

8.14. R-1 children will differ in the concern about psychosomatic troubles from R-2 children.

9. Differences between urban children from families of unqualified and qualified workers and rural children

9.1. Urban children of a) unqualified and b) qualified workers will obtain higher scores on a reading test and achievement tests on different school subjects than rural children.

9.2. Urban children of a) unqualified and b) qualified workers will have higher school marks at the end of the school-year than rural children.

9.3. Urban children of a) unqualified and b) qualified workers will obtain higher scores on a non-verbal intelligence test than rural children.

9.4. Urban children of a) unqualified and b) qualified workers will have higher occupational aspirations and occupational expectations than rural children.

9.5. Urban children of a) unqualified and b) qualified workers will have higher educational aspirations than rural children.

9.6. Urban children of a) unqualified and b) qualified workers will have better study habits than rural children.

9.7. Urban children of a) unqualified and b) qualified workers will have a better style of learning than rural children.

9.8. Urban children of a) unqualified and b) qualified workers will differ in sociability from rural children.

9.9. Urban children of a) unqualified and b) qualified workers will differ in the concern about social relations from rural children.

9.10. Urban children of a) unqualigied and b) qualified workers will differ in agression from rural children.

9.11. Urban children of a) unqualified and b) qualified workers will differ in restlessness from rural children.

9.12. Urban dhildren of a) unqualified and b) qualified workers will differ in anxiety from rural children.

9.13. Urban children of a unqualified and b) qualified workers will differ in neurotic symptoms from rural children.

9.14. Urban children of a) unqualified and b) qualified workers will differ in the concern about psychosomatic troubles from rural children.

10. Differences among urban children with regard to socio-economic status of the family

10.1. Professional workers' children will obtain higher scores on a reading test and achievement tests on different school subjects than qualified workers' children who will do better in this respect than unqualified workers' children.

10.2. Professional workers' children will have higher school marks at the end of the schoolyear than qualified workers' children who will do better in this respect than unqualified workers' children.

10.3. Professional workers' children will obtain higher scores on a non-verbal intelligence test than qualified workers' children who will do better in this respect than unqualified workers' children.

10.4. Professional workers' children will have higher occupational aspirations and occupational expectations than qualified workers' children who will do better in this respect than unqualified workers' children.

10.5. Professional workers' children will have higher educational aspirations than qualified workers' children who will do better in this respect than unqualified workers' children.

10.6. Professional workers' children will have better study habits than qualified workers' children who will do better in this respect than unqualified workers' children.

10.7. Professional workers' children will have a better style of learning than qualifed workers' children who will do better in this respect than unqualified workers' children.

10.8. Professional workers' children will differ in sociability from qualified workers' children who will differ in this respect from unqualified workers' children.

10.9. Professional workers' children will differ in the concern about social relations from qualified workers' children who will differ in this respect from unqualified workers' children.

10.10. Professional workers' children will differ in agression from qualified workers' children who will differ in this respect from unqualified workers' children.

10.11. Professional workers' children will differ in restlessness from qualified workers' children who will differ in this respect from unqualified workers' children.

10.12. Professional workers' children will differ in anxiety from qualified workers' children who will differ in this respect from unqualified workers' children.

10.13. Professional workers' children will differ in neurotic symptoms from qualified workers' children who will differ in this respect from unqualified workers' children.

10.14. Professional workers' children will differ in the concern about social relations from qualified workers' children who will differ in this respect from unqualified workers' children.

11. Differences between equally intelligent children from different SES groups

11.1.1. Professional workers' children will obtain higher scores on a reading test and achievement tests on different school subjects than unqualified workers' children.

11.1.2. Professional workers' children will obtain higher scores on a reading test and achievement test on different school subjects than qualified workers' children.

11.1.3. Qualified workers' children will obtain higher scores on a reading test and achievement tests on different school subjects than unqualified workers' children.

11.2.1. Professional workers' children will have higher school marks at the end of the schoolyear than unqualified workers' children.

11.2.2. Professional workers' children will have higher school marks at the end of the schoolyear than qualified workers' children.

11.2.3. Qualified workers' children will have higher school marks at the end of the schoolyear than unqualified workers' children.

11.3.1. Professional workers' children will have higher occupational aspirations and occupational expectations than unqualified workers' children.

11.3.2. Professional workers' children will have higher occupational aspirations and occupational expectations than qualified workers' children.

11.3.3. Qualified workers' children will have higher occupational aspirations and occupational expectations than unqualified workers' children.

11.4.1. Professional workers' children will have higher educational aspirations than unqualified workers' children.

11.4.2. Professional workers' children will have higher educational aspirations than qualified workers' children.

11.4.3. Qualified workers' children will have higher educational aspirations than unqualified workers' children.

11.5.1. Professional workers' children will have better study habits than unqualified workers' children.

11.5.2. Professional workers' children will have better study habits than qualified workers' children.

11.5.3. Qualified workers' children will have better study habits than unqualified workers' children.

11.6.1. Professional workers' children will have a better style of learning than unqualified workers' children.

11.6.2. Professional workers' children will have a better style of learning than qualified workers' children.

11.6.3. Qualified workers' children will have a better style of learning than unqualified workers' children.

11.7.1. Professional workers' children will differ in sociability from unqualified workers' children.

11.7.2. Professional workers' children will differ in sociability from qualified workers' children.

11.7.3. Qualified workers' children will differ in sociability from unqualified workers' children.

11.8.1. Professional workers' children will differ in agression from unqualified workers' children.

11.8.2. Professional workers' children will differ in agression from qualified workers' children.

11.8.3. Qualified workers' children will differ in agression from unqualified workers' children.

11.9.1. Professional workers' children will differ in restlessness from unqualified workers' children.

11.9.2. Professional workers' children will differ in restlessness from qualified workers' children.

11.9.3. Qualified workers' children will differ in restlessness from unqualified workers' children.

11.10.1. Professional workers' children will differ in anxiety from unqualified workers' children.

11.10.2. Professional workers' children will differ in anxiety from qualified workers' children.

11.10.3. Qualified workers' children will differ in anxiety from unqualified workers' children.

11.11.1. Professional workers' children will differ in neurotic symptoms from unqualified workers' children.

11.11.2. Professional workers' children will differ in neurotic symptoms from qualified workers' children.

11.11.3. Qualified workers' children will differ in neurotic symptoms from unqualified workers' children.

12. Differences between boys and girls

12.1. Boys and girls will obtain equal scores on a reading test and achievement tests on different school subjects.

12.2. Boys and girls will have equal school marks at the end of the schoolyear.

12.3. Boys and girls will obtain equal scores on a non-verbal intelligence test.

12.4. Boys and girls will have equal occupational aspirations and occupational expectations.

12.5. Boys and girls will have equal educational aspirations.

12.6. Boys and girls will have equal study habits.

12.7. Boys and girls will have an equal style of learning.

12.8. Boys and girls will not differ in sociability.

12.9. Boys and girls will not differ in the concern about social relations.

12.10. Boys and girls will not differ in aggression.

12.11. Boys and girls will not differ in restlessness.

12.12. Boys and girls will not differ in anxiety.

12.13. Boys and girls will not differ in neurotic symptoms.

12.14. Boys and girls will not differ in the concern about psychosomatic troubles.

METHOD

SAMPLE DESCRIPTION

Our research covered pupils from the 4th and 8th grades of elementary school. We had to make a selection within the population; for the purpose of our research we selected certain groups of pupils by stratification sampling. Considering the demo-geographic aspect we devided the pupils into two main strata, i.e. urban and rural.

THE URBAN SAMPLE

The urban stratum was divided into three substrata. The first substratum covered children from towns with more than 100,000 inhabitants; this sample was marked T-1. The second substratum covered children from towns with 5,000 - 20,000 inhabitants; this sample was marked T-2. The third substratum consisted of children from towns with 2,000 - 5,000 inhabitants. This sample was marked T-3.

It is typical of Slovene urbanization that most of the urban population is concentrated in two large towns (Ljubljana, Maribor) and 67 small towns. There are only two towns that fall into the category of medium-sized towns (Celje, Kranj) and they contain 8.3% of the total urban population. Therefore the children from these towns were omitted. As stated by I. Vrišer,* small towns are still predominant in our urban network; they contain almost one half (47.1%) of the total urban population of Slovenia. The author also states that our average towns are rather small in size; they have nearly 4,000 - 5,100 inhabitants. Our urbanization is concentrated almost entirely in small towns, which makes Slovenia a typical country of small towns and

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*Igor Vrišer, Mestna in urbana omrežja v Sloveniji, Geografski zbornik-, Slovenska akademija znanosti in umetnosti. Ljubljana 1974, str. 210-211 in 293.

"small scale urbanization". The greatest percentage of industrial production also takes place in these towns which maked Slovene towns rather different from those in other developed countries, where production takes place mostly in large towns. Because of this ideosyncrasy the children from small towns were divided into the two substrata that were described earlier and marked T-2 and T-3.

From each urban substratum, 14 schools were randomly selected. Thus, a 20% sample of schools was taken from the T-1 substratum, a 22% sample from T-2 and a 25% sample from the T-3 substratum.

In each school, one 4th grade and one 8th grade class were randomly selected. Using the criteria for the socio-economic status of the parents, twelve pupils were selected from each of these classes; six boys and six girls. Consequently such a sample contained:

4 children of professional workers (2 boys and 2 girls)
4 children of qualified workers (2 boys and 2 girls)
4 children of unqualified workers (2 boys and 2 girls).

In this way, each urban substratum contained 168 pupils (12 pupils X 14 schools). As there were 3 substrata, (168 pupils X 3), the urban sample contained altogether 504 pupils from the 4th grade and 504 pupils from the 8th grade. At the same time this urban sample covered the three main SES strata, namely children of professional, qualified and unqualified workers. In each of these strata there were 168 4th grade pupils and 168 8th grade pupils. At the time of testing, the mean age of the 4th grade pupils was 10.7 years and that of the 8th grade pupils was 14.7 years.

The sample is described in detail in two additional schemes at the end of this chapter; it can be seen that the number of pupils is somewhat lower than the number in the originally planned sample described in the previous paragraph. This happened because some pupils were absent from classes on the day of testing. Testing lasted four days altogether in each school. There were time-lapses between testing sessions and only the results of those pupils who attended all the sessions were used. Therefore the sample diminished by about 5% which did not, in our opinion, affect the representability of the sample since all the substrata as well as their basic units still contained a suitable number of pupils. This can be seen from the scheme at the end of the chapter.

We secured greater representability of our sample by involving a greater number of schools from each substratum (14 schools from each), diminishing at the same time the number of children from individual schools (12 4th grade adn 12 8th grade pupils from each school). The organization of the research would have been easier and cheaper had we taken just the reverse course: a smaller number of schools and a greater number of pupils from one school. Thus the number of pupils would have been the same but the representability and validity of the results would have been affected.

We also examined the differences between equally intelligent children from different SES. For this purpose we selected those children from the total urban sample who were equally intelligent but differed with regard to SES. Each child included in this comparison had an equally intelligent counterpart from another SES, i.e. the two children obtained exactly the same number of points on an intelligence test (LTIN) and were of the same sex. In this way suitable groups were formed and comparisons were carried out between professional and unqualified workers' children, between professional and qualified workers' children, and between qualified and unqualified workers' children. Because of the criteria mentioned the number of children involved in this comparison decreased yet the individual socio-economic groups remained large enough to consider the results valid and reliable.

The number of children involved in these comparisons can be seen in Table 7 and 8 which also present the means (M) amd standard deviations (SD) of the groups compared in an intelligence test (LTIN).

TABLE 7: Groups of 4th grade pupils with regard to SES

SES	No. of children	LTIN-test M	SD
Professional workers	70	45.90	9.31
Unqualified workers	70	45.90	9.31
Professional workers	84	50,19	9.13
Qualified workers	84	50.19	9.13
Qualified workers	85	41.84	10,28
Unqualified workers	85	41.84	10,28

TABLE 8: Groups of 8th grade pupils with regard to SES

SES	No. of children	LTIN test M	SD
Professional workers	68	45.71	8.72
Unqualified workers	68	45.71	8.72
Professional workers	85	45.79	8.13
Qualified workers	85	45.79	8.13
Qualified workers	82	41.99	10.56
Unqualified workers	82	41.99	10.56

Index of schools involved in the urban sample

Urban substratum T-1
Schools in large towns with more than 100,000 inhabitants

Elementary schools in Ljubljana

1. Bičevje
2. Hinka Smrekarja
3. Jožeta Moškriča
4. Majde Vrhovnik
5. Mirana Jarca
6. Prule
7. Toneta Tomšiča

Elementary schools in Maribor

1. Bojana Iliha
2. Ivana Cankarja
3. Maksa Durjave
4. Bratov Polančičev
5. Antona Aškerca
6. Prežihovega Voranca
7. Otona Župančiča

Urban substratum T-2
Elementary schools in small towns with 5,000 - 20,000 inhabitants

1. Antona Tomaža Linharta, Radovljica
2. Frana Albrehta, Kamnik
3. Gustava Šiliha, Velenje
4. Janka Premrla-Vojka, Koper
5. Ivana Škvarča, Zagorje ob Savi
6. Jožeta Mihevca, Idrija
7. Katje Rupena, Novo mesto
8. Kočevje
9. Milojke Štrukelj, Nova Gorica

66

10. Pohorski odred, Slovenska Bistrica
11. Postojna
12. Prežihovega Voranca, Ravne na Koroškem
13. Murska Sobota
14. Toneta Žnidaršiča, Ptuj

Urban substratum T-3
Elementary schools in small towns with 2,000 - 5,000 inhabitants

1. Borisa Kidriča, Ajdovščina
2. Cerknica
3. Dragotina Ketteja, Ilirska Bistrica
4. Franceta Bevka, Tolmin
5. Dr. Franceta Prešerna, Ribnica
6. Ivana Cankarja, Ljutomer
7. Luisa Adamiča, Grosuplje
8. Mengeš
9. Miloša Ledinka, Črna na Koroškem
10. Mirana Jarca, Črnomelj
11. Petra Šprajca-Jurija, Žalec
12. Rače
13. Save Kladnik, Sevnica
14. Železniki

The rural sample

The data collected in the 1971 census indicate that 61.3% of the Slovene population live in non-urban areas. We were particularly interested in areas that were decidedly rural; no pupils from areas that had less than 40% of peasants were selected for our research. The sample covered two types of rural area, i.e. two substrata. The first, where 40% - 75% of the inhabitants were peasants was marked R-1. The second, where more than 75% of the population were peasants, was marked R-2. In this way typical rural areas were encompassed where people still live mostly by farming. A low urbanizational level is also characteristic for these areas.

14 schools were randomly selected from each rural substratum. Incomplete rural elementary schools were not included in the sample; they have combined classes and usually a reduced curriculum as well. The number of these schools is gradually decreasing. Thus, a 22% sample of complete elementary schools in the rural substratum R-1 was taken, and a 60% sample from the rural substratum R-2.

From each school, one 4th grade and one 8th grade class were randomly selected. From each of these classes, 8 pupils were then selected:

4 children from peasant families (2 boys and 2 girls)
4 children from semi-peasant familied (2 boys and 2 girls).

Families who owned a farm and lived exclusively by farming were considered peasant families (PP), while those who own a farm but one of the parents (usually the father) workers permanently as a worker outside the farm, were considered semi-peasant families (SP).

Thus we obtained 112 pupils (8 pupils x 14 schools) from each rural substratum. As we had two substrata (112 pupils x 2), the rural sample covered altogether 224 pupils. At the time of testing, the mean age of the 4th grade pupils was 10.7 years while that of the 8th grade schools was 14.7 years. This sample is also presented in detail in the scheme on pages 61, 62. There it is evident that we managed to test all the pupils envolved in the planned sample. In the selection of country pupils we again achieved a greater representability of the sample by involving a greater number of schools (14 from every substratum) and a smaller number of selected pupils from each shool (eight 4th grade pupils and eitht 8th grade pupils from each school).

The rural sample covered children from the schools listed; these are located in different areas of Slovenia. The demogeographic location of these places can be clearly seen from the map at the end of this report.

Index of schools covered by the rural sample

Rural substratum R-1
Schools from areas with 40% to 75% of peasant inhabitants

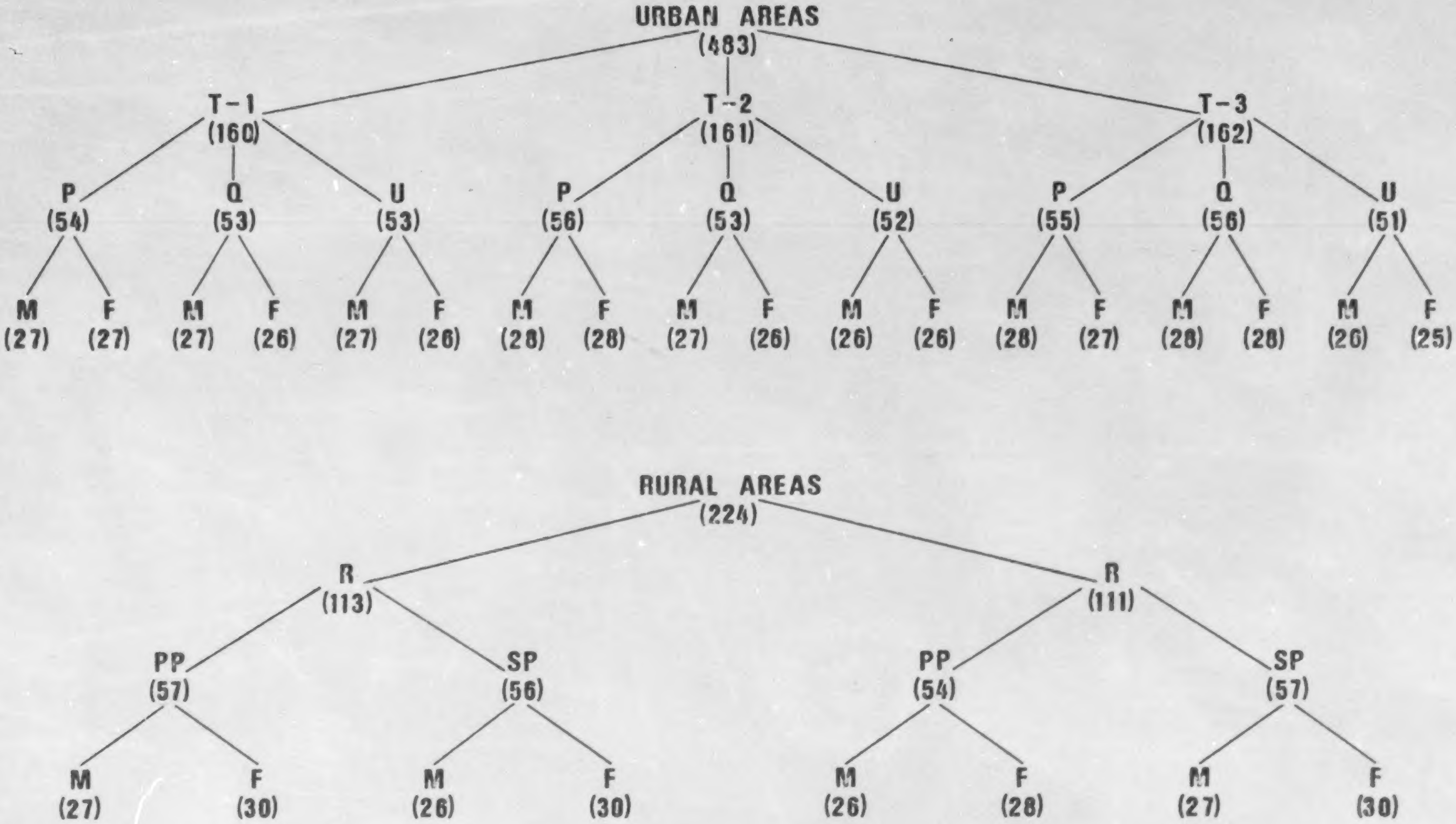
1. Otona Župančiča, Rogaševci
2. Bizeljsko
3. Dobrovo
4. Jakobski dol
5. Komandanta Staneta, Dragatuš
6. Juršinci
7. Ljubno ob Savinji
8. Nova vas, Bloke
9. Dr. Petra Držaja, Veliki Gaber
10. Pohorskega bataljona, Oplotnica
11. Pristava pri Mestinju
12. Puconci
13. Šempas
14. Škocjan

Rural substratum R-2
Schoold from areas with more than 75% of peasant inhabitants

1. Dr. Antona Rotdajča, Grad
2. Bistrica ob Sotli
3. Bodenci
4. Bogojina
5. Bučkovci
6. Borisa Kraigherja, Gradišče
7. Črešnovci
8. Gornji Petrovci

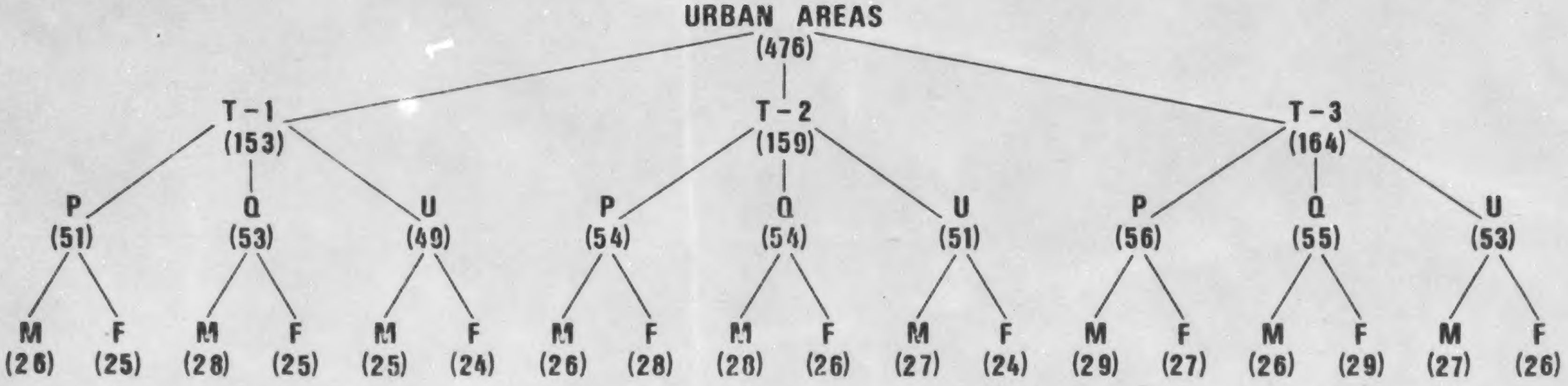
9. Negova
10. Podzemelj
11. Velka
12. Videm ob Ščavnici
13. Tržišče
14. Žetale

4th GRADE PUPILS (TEN-YEAR-OLDS)


URBAN AREAS (483)
T-1 (160)
T-2 (161)
T-3 (162)
P (54)
Q (53)
U (53)
P (56)
Q (53)
U (52)
P (55)
Q (56)
U (51)
M (27)
F (27)
M (27)
F (26)
M (27)
F (26)
M (28)
F (28)
M (27)
F (26)
M (26)
F (26)
M (28)
F (27)
M (28)
F (28)
M (26)
F (25)
RURAL AREAS (224)
R (113)
R (111)
PP (57)
SP (56)
PP (54)
SP (57)
M (27)
F (30)
M (26)
F (30)
M (26)
F (28)
M (27)
F (30)

T – towns; P – professional workers' children; Q – qualified workers' children; U – unqualified workers' children;
R – rural areas; PP – peasant children SP – semi-peasant children; M – male; F – female;

8th GRADE PUPILS (FOURTEEN-YEAR-OLDS)


URBAN AREAS
(476)
T - 1
(153)
T - 2
(159)
T - 3
(164)
P
(51)
Q
(53)
U
(49)
P
(54)
Q
(54)
U
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P
(56)
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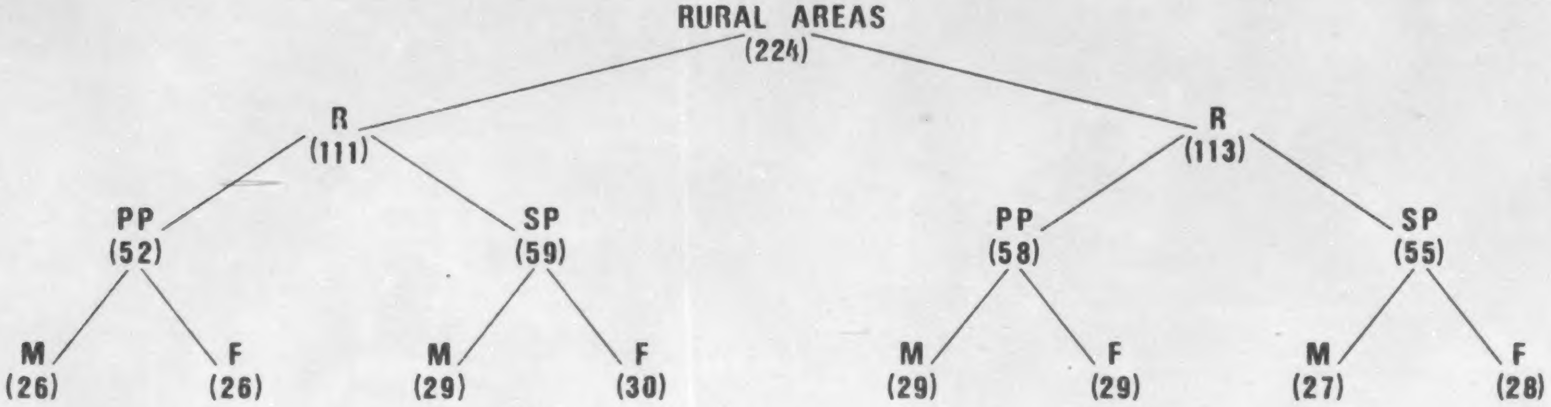
RURAL AREAS
(224)
R
(111)
R
(113)
PP
(52)
SP
(59)
PP
(58)
SP
(55)
M
(26)
F
(26)
M
(29)
F
(30)
M
(29)
F
(29)
M
(27)
F
(28)

T – towns; P – professional workers' children; Q – qualified workers' children; U – unqualified workers children;
R – rural areas; PP – peasant children; SP – semi-peasant children; M – male; F – female;

1. THE TESTS AND QUESTIONNAIRES USED

School marks

One of the main problems of our research was determining the academic achievement of the pupils. This was done in two ways, namely by means of traditional school marks and by means of achievement tests. The school marks in individual subjects for each pupil were obtained at the end of the school year. The research that has been carried out so far shows that teachers evaluate their pupils' knowledge quite subjectively. Of course, this is not a criterion to indicate real differences in the knowledge of pupils from different environments. Therefore it was necessary to apply a more objective criterian, i.e. achievement tests.

Achievement tests

Objective tests for determining the knowledge of pupils at the end of the school year were not readily available; we had to compile them ourselves. Counsellors of the Board of Education helped us tackle this quite demanding task; on the basis of the curriculum and the textbooks used in schools they selected a range of representative material that pupils should have mastered by the end of the school year. Basic and general knowledge in individual school subjects was required. Test items were then formulated and a preliminary testing was carried out on a special sample of pupils. Thus, the test for each school subject was checked on 300 4th grade pupils and 250 8th grade pupils. The results were analysed and the level of difficulty and discrimination index was determined for each item. In multiple choice items, the attractiveness of answers was also determined. Unsuitable items were then replaced by new and more suitably structured ones. After the statistical analysis and the omission of several items we still had a sufficient number of items since twice the necessary number were made for this purpose.

ACHIEVEMENT TESIS FOR 4th GRADE PUPILS

a) Slovene language achievement test

The test contained 145 items that covered syntax, phonetics, sentence structure, knowledge of writers and poets. The index to difficulty was 73% on average, while the difficulty of individual items varied from 29% to 95%. The index of discrimination, calculated by means of the biserial correlation ranged from .20 to .90.*

b) Mathematics achievement test

The test contained 40 items which covered: simple calculation, knowledge of mathematical and geometrical concepts and problem solving. The index of difficulty was 59% on average while the difficulty of individual items varied from 23% to 88%. The index of discrimination for individual items ranged from .32 to .80.

c) Social studies achievement test

The test contained 55 items and was divided into 3 parts that covered knowledge of facts, knowledge of social concepts and comprehension of social events. The index of difficulty was 68% on average while the difficulty of individual items ranged from 31% to 94%. The index of discrimination for individual items ranged from .29 to .70.

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*The statistical indexes mentioned were calculated on the basis of the data obtained by a preliminary testing of 4th grade town pupils. There were 300 pupils in this sample.

d) Natural sciences achievement test

The test contained 65 items and was also divided into 3 parts that covered knowledge of facts, knowledge of basic concepts about nature and comprehension of natural phenomena. The index of difficulty was 69% on average, while the difficulty of individual items ranged from 27% to 96%. The index of discrimination for individual items ranged from .22 to .75.

ACHIEVEMENT TESTS FOR 8th GRADE PUPILS

a) Slovene language achievement test

The test contained 140 items which covered syntax, morphology, literature and literary theory. The index of difficulty was 64% on average, the difficulty of individual items varied from 16% to 99%. The index of discrimination, calculated by means of the biserial correlation, ranged from .18 to .82.*

b) Mathematics achievement test

The test contained 34 items, which covered arithmetical calculation, knowledge of mathematical and geometrical concepts and problem solving. The test was quite a challenge; the index of difficulty was 42% on average and the difficulty of individual items ranged from 7% to 88%. The index of discrimination for individual items varied from .25 to .94.

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*The statistical indexes mentioned were calculated on the basis of the data obtained by a preliminary testing of 8th grade town pupils. There were 250 pupils in this sample.

c) English language achievement test

The test contained 65 items that covered knowledge of simple linguistic structures, comprehension of sentences and shorter texts. The index of difficulty was 62% on average, the difficulty of individual items ranged from 20% to 90%. The index of discrimination for individual items ranged from .25 to .85.

d) History achievement test

The test contained 55 items and was divided into three parts covering knowledge of facts, knowledge of historical concepts and comprehension of social laws. The index of difficulty was 62% on average, the difficulty of individual items ranged from 10% to 90% while the index of discrimination ranged from .29 to .76.

e) Biology achievement test

The test contained 100 items covering knowledge of biological concepts, fact, and comprehension of biological laws. The index of difficulty was 51% on average while the difficulty of individual items ranged from 18% to 85%. The index of discrimination ranged from .23 to .66.

Reading achievement test

For determining the reading achievement of the pupils, the "Inter-American Series" test by Herschel T. Manuel, Austin, Texas, was modified to suit our needs.

The reading achievement test for 4th and 8th grade pupils consisted of 3 parts: vocabulary, reading speed and degree of comprehension. There were multiple choice items with five possible answers. The first part contained 40, the second 30 and the third 45 items.

Because of the changes and decrease in the number of items we had to determine, by means of preliminary testing, adequate times for answering the test. We selected those times of answering the subtests that produced the most scattered results. Thus, the first part of the test was limited to 10 minutes, the second to 7 minutes and the third to 22 minutes.

The test was then included in our research. Later, it was evident from the results obtained that its validity was quite convincing. With the 4th grade urban pupils, the correlations between the reading achievement test and achievement tests on individual school subjects ranged from .61 to .71, while with 8th grade pupils they ranged from .48 to .64. The reading achievement test also correlated rather well with the Grade point average. With 4th grade pupils this correlation was .64 and with 8th grade pupils it was .58.

Intelligence tests

For the purpose of our research, the non-verbal intelligence test by I. Lorge and R.L. Thorndike was used. The test was marked LTIN and contained 80 items. We decided to use it because experience in the USA showed that it correlated rather well with academic achievement. For example, it correlated with California Achievement tests from .67 to .75 in the 4th grade, and up to .77 in the 8th grade. At the same time it correlated highly with other intelligence tests: .80 with WISC and .79 with Stanford-Binet. It is generally acknowledged to be one of the best paper-and-pencil tests of general intelligence.

The original test consists of a verbal and a non-verbal part. The authors emphasise that in the verbal part, the children from culturally developed environments have a considerable advantage, while the non-verbal part is very convenient also for children from less developed environments. For this reason we use only the non-verbal part which can be used as an independent test. The first preliminary experiences with our children showed that it was not necessary to modify the test, except for three items where the pictorial symbols did not fit our cultural environment.

This test is particularly convenient as it is possible to use it for children from the 3rd grade of elementary school till the end of secondary school. It has several levels of difficulty so as to suit individual grades while the basic structure remains the same for all of them. Level A was used in testing our 4th grade pupils, and level D for testing 8th grade pupils.

Study habits questionnaire

Separate questionnaires were compiled for determining the study habits of 4th grade and 8th grade pupils.

The questionnaire for 4th grade pupils comprised 75 questions (items) in its final form. The pupils answered questions by underlining "yes" or "no". In the original form the questionnaire consisted of a greater number of questions which were tested on a sample of 250 pupils. The answers of the most successful pupils were then compared with those of the least successful ones by chi-squre test and the questions that did not discriminate these two groups very well were excluded, leaving a total of 75 questions. Here are a few examples:

Do you study every day? YES NO

Do you do your homework if it is very difficult? YES NO

Do you feel tired and sleepy when you begin studing? YES NO

The factor structure of the questionnaire was analysed in applying the "principal components" method. The factors, however, cannot be clearly determined by means of the results of this analysis which is probably a consequence of the fact that at this age study habits are not yet sufficiently developed. Therefore only the total results were considered. 1 point was given for a suitable study habit while for an unsuitable or absent study habit no points were given.

The questionnaire for 8th grade pupils contained 110 questions. Before using it we analysed each question so that in the final selection only those questions were left that discriminated successful and less successful pupils well enough.

The pupils answered each question by marking the most appropriate answer on a 5-degree rating scale: almost always (A), very often (V), often (O), sometimes (S) and almost never (N). The answers were given 1 to 5 points where 5 points meant a well-developed study habit and 1 point a very weak or non-existent study habit.

Before testing it was pointed out to the pupils that we were interested only in their habits and their attitude to learning and not in their opinion as to which habits is good or bad. Therefore they were told that answers will not be categorized into right and wrong ones.

A factor analysis was carried out, applying the "principal components" method. In this way, four factors were extracted and identified. The first one covered pupils' *homework schedules*, the second *methods and techniques of learning*, the third *coping with problems in learning* and the fourth *self-confidence*.The first and second factor were predominant as they figure in more than half the questions. As an illustration, here are four questions, one for each factor mentioned:

Does it take you long to decide to study seriously? A V O S N

Do you try to put everything you learn in to a system? A V O S N

Is it difficult for you to work out what is most important in the material you learn? A V O S N

When you write an exercise in school, do you have a feeling that you are going to do it well? A V O S N

Youth Inventory

This inventory was used only for 8th grade pupils. It was based on the American SRS Youth Inventory (type S) from 1960, by H.H. Remmers and B. Shimberg. It was modified for our youth and tested on a sample of 8th grade pupils which covered 284 children of qualified and unqualified workers and 218 children of professional workers. The questions were analysed in order to find out to what degree they discriminated youths from different SES groups. 66% of the questions were found to be suitable; the inventory finally consisted of 180 questions and in this form it was used in our research.

A factor analysis of the inventory was made, applying the "principal components" method. The inventory proved to be rather heterogeneous and saturated with several factors. For the purpose of our research we made use only of the questions that covered two factors: concern about social relations and concern about psychosomatic troubles.

The pupils answered questions by marking the most appropriate answer on a 4-degree rating scale: I am very concerned, to a certain extent, a little, not at all. Answers were given 0 to 3 points where 3 points meant that the pupil was very concerned and no points were given if he reported no concern at all.

Here are three questions for each factor.

I would like to make new friends.

I would like to play an important role in my social circles and among my mates.

I have to learn to co-operate better with other people.

I often have a headache.
I get tired quickly.
I am worried about my health.

Occupational aspirations questionnaire

The questionnaire served for determining the pupils' occupational aspirations. The children were to answer the question: "What occupation would you like to have when you grow up?" At the same time they were asked to describe the work that the chosen occupation required in order to ascertain that they know it.

In the case of occupational expectations, the children were to answer the question: "What occupation do you think you will probably have when you grow up?" Here again the pupils were asked to describe the work in such an occupation.

The pupils also answered the question "What is your father's occupation?" These answers were needed for the comparison of the father's occupation with the aspirations of the child.

The occupations that the pupils mentioned were divided into six groups. The first one covered highly demanding occupations like university professor, filmstar, specialist in medicine, general manager of a large establishment etc. The second group covered very demanding occupations like doctor, engineer, lawyer, manager of a medium-sized establishment etc. The third group covered rather demanding occupations like teacher, flight mechanic, nurse etc. The fourth group covered demanding occupations like mechanic, electrician, train driver etc. The fifth group covered medium or less demanding occupations like driver, tinker, chimneysweep etc. The sixth group consisted of simple occupations like receptionist, cleaner, courier. There was also the delicate question of how to categorize the occupation "farmer". Considering our present conditions regarding rural production, this occupation was placed in the fifth group. On the basis of the job requirement level, these occupations were assigned 1-6 points.

The questionnaire and the scale of occupation were tested in the inter-cultural study Coping Style and Achievement: Cross-National Study of School Children. This questionnaire proved to be very suitable.

Demographic questionnaire

By means of this questionnaire we obtained some data on the pupil and his family. These general data were needed for identificantion of the pupils and for calculating the family indexes. The data covered: age, sex, birthplace, parents' occupation, the number of children and adults in the family, housing conditions and other data. We also inquired whether the family had a radio and TV set, a car, and whether they took some daily newspaper.

The pupils also answered the question which school they would like to attend. The schools were divided into 5 categories: elementary school, trade schools, high school and other secondary schools, college and university. The categories were given 1-5 points where 1 point stood for university education and 5 points for elementary school education. The pupils educational aspirations were determined on the basis of these data.

Personality characteristics questionaire

A special questionnaire was made for determining the style of learning and some personality characteristics of the pupils, evaluated by their teachers.

The questionnaire initially contained 40 descriptions of types of behavuor. After a factor analysis using the "principal components" method was carried out, only 28 descriptions of behavior that were sufficiently saturated with identified factors, were found satisfactory. These were marked as follows: style of learning, social behavior, aggressive behavior, restless behavior, anxiety and neurotic symptoms.

The teachers reported their pupils' behavior by means of a five-point rating scale: never, very rarely, sometimes, almost always, always. Here are a few examples:

The pupil can use the acquired knowledge in solving similar problems.

He likes to help his school-mates.

He fights with other children.

He chatters during lessons.

He is afraid of new things and situations.

He bites nails or fingers.

The answers were given 1-5 points where 5 stood for the most suitable and 1 for the least suitable behavior. In the style of learning and social behavior, higher numerical scores also stood for more suitable behavior and vice versa. As to the other characteristics, however, higher numerical scores stood for less frequent occurrence of symptoms or of a certain type of behavior.

Objective data on pupils

Beside the school marks, the teachers provided also other data on the pupils and their families. By means of a special questionnaire they reported how many hours each pupils had been absent from lessons, how far from school the pupils lived, whether they walked to school, rode a bus etc.

The teachers also reported how often the parents attended the Parent-and-Teacher meetings, namely always, often, sometimes, very rarely, never.

The teachers also provided data on pupils' housing conditions. They reported how many people lived in each pupil's family, how many rooms there were, whether it was a flat or a house etc. On the basis of these data the housing index for each pupils was obtained; the number of rooms was divided by the number of family members.

Objective data on teachers and schools

The headmasters of the schools gave us the names of the teachers who taught the tested pupils. Educational authorities than provided the academic history of these teachers, i.e. the data on schools, academies or faculties they had attended. We wanted to find out whether all the teachers had an adequate qualification for their work. At the same time we obtained data on the teachers' age and period of teaching.

The same authorities also provided some data on schools that were included in our research. We were particularly interested to find out whether the schools had laboratory facilities with special classrooms, the number of these, the number of departments and the number of pupils in each school. We were also interested whether the schools had morning and afternoon lessons alternatively and how many books there were in the school library.

2. *TESTING PROCEDURE*

Testing in 70 schools in Slovenia was carried out by a team of 16 people; 12 senior students of psychology, 2 assistent professors and both chief investigators. Before the team started working, a special seminar was held to provide all the examiners with the necessary information on the tests, questionnaires and the techniques of testing. A preliminary testing was then carried out on three schools that were not included in our sample, followed by a discussion on any problems that emerged in this session. Thus, standard conditions and procedure were secured for the testing.

A special permission for the testing was granted by The Board of Education of SRS. The schools involved were informed about this and they cooperated with us very well.

As several instruments for measurement were used we had to carry out the testing in two phases. The first one lasted two mornings, i.e. the first three morning lessons. Thus the pupils worked in favourable conditions as they were not yet tired. They answered some questionnaires, reading achievement test and an intelligence test. This testing was carried out in the first half of May, 1973. The second phase also lasted two mornings, each time the first for three morning lessons. In this phase we tested the knowledge of pupils by objective tests. This was carried out at the end of May and beginning of June.

3. *STATISTICAL PROCESSING*

The differences in the variables examined between children from large and small towns and the differences with regard to SES and the sex were three-way analysis of variance. The first factor were the towns which were divided with regard to the number of inhabitants into three cathegories: T-1, T-2 and T-3. The second factors is the SES of the child's family. This factor also contains three cathegories: professional workers' children (P), qualified workers' children (Q) and unqualified workers'children (U). The third factor is the child's sex. The analysis was thus done for the 3 x 2 x 2 design.

The differences between rural children were examined with analysis of variance by 2 x 2 x 2 design.

The first factor was the countryside which was divided with regard to the number of peasant inhabitants into two cathegories: R-1 and R-2. The second factor covers children from rural families where both parents are peasants (PP) and children from semi-peasant families where one of the parents is employed outside the farm while the other is a peasant (SP). The third factor is the sex.

The differences between urban and rural children were also examined with two-way analysis of variance. The first factor covers two cathegories of children: unqualified town workers' children (U) and the total sample of rural children (R). The second factor is the sex. Following the same design we also examined the differences between qualified town workers' children (Q) and their rural age-mates (R); the second factor was also the sex of the child.

The differences between equally intelligent children who differed with regard to SES were computed by t-test. The latter was calculated for all the variables included, which covered urban children from different SES.

The differences in the variables between different groups of children were interpreted, on the basis of tne calculated F or t-test, only in the case the level of significance exceeded or equalled .05. In the interpretation we also payed attention to the question whether the mean differences in a certain variable between two groups of children were large or small; this was expressed with z-scores.

The correlation between criterion and predictor variables were calculated by product-moment correlation (r). In the interpretation, size of the coefficient and the level of significance were taken into account.

RESULTS OF THE 4th GRADE PUPILS
AND
DISCUSSION

DIFFERENCES BETWEEN CHILDREN FROM LARGE AND SMALL TOWNS, BETWEEN CHILDREN FROM SEMI-PEASANT AND PEASANT AREAS AND BETWEEN URBAN AND RURAL CHILDREN

THE RESULTS OF 4th GRADE PUPILS

We were interested to find out whether there were any differences in academic achievement and some personality characteristics between large and small town 4th grade pupils. It is evident from the sample description that that the towns were divided into three groups with regard to the number of inhabitants: T-1, T-2 and T-3. Our hypothesis was that children would differ with regard to the size of the town; children from larger town would be more successful in school, have more developed intellectual abilities, higher occupational and educational aspirations, better study habits and style of learning and would also differ in other personality characteristics from children from smaller towns.

We were also interested in rural children's academic achievement. There were divided with regard to demo-geographic and social characteristics into two groups: R-1 (semi-peasant areas) and R-2 (peasant areas). Here again we assumed that R-1 children would do better in school, have more developed intellectual abilities, higher occupational and educational aspirations, better study habits and style of learning and would also differ in personality characteristics from R-2 children.

We were particularly interested to find out whether there are any differences between urban and rural children. In this comparison, R-1 and R-2 children were pooled and treated together as rural children (R). Rural children's results were first compared with those of unqualified town workers' children and then with those of qualified town workers' children.

These town and country children come from families with a similar socio-economic status (SES). Therefore this comparison did not cover children whose parents were professional workers with completed secondary, college or university education. Our hypothesis was that urban children (of unqualified and qualified workers) did better in school, had more developed intellectual abilities, higher occupational and educational aspirations, better study habits and style of learning and also differed in personality characteristics from rural children.

Reading achievement

1.1.* The town children received the following scores in the Reading achievement test:

Groups	M	SD	F-test	p
T-1	62.02	20.99		
T-2	58.99	20.51	5.01	.01
T-3	55.34	20.83		

The hypothesis is confirmed. The highest scores were received by T-1 children, followed by T-2 and T-3 children respectively. The differences regarding towns, even if statistically significant, from the eductional point of view do not amount to much and can consequently be assumed to have only a minor effect on the children's academic achievement.

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*The ciphers correspond with the hypothesis number (see page 34).

2.1. The rural children received the following scores in the Reading achievement test:

Groups	M	SD	F-test	p
R-1	36.17	16.15	3.13	n.s.
R-2	32.56	12.63		

The hypothesis is rejected. The children from semi-peasant areas (R-1) did score somewhat higher than their age-mates from peasant areas (R-2) yet these differences are small and statistically not significant.

3.1.(a) There were, however, considerable differences in the scores in the Reading achievement test between the children of unqualified town workers (U) and the rural children (R-1 and R-2 pooled into R). The mean scores were as follows:

Groups	M	SD	F-test	p
U	49.67	18.72	78.83	.001
R	34.38	14.62		

The hypothesis is confirmed. The children of unqualified town workers scored significantly higher in the Reading achievement test than did their rural age-mates. An elaborate analysis revealed large differences between the two groups in vocabulary and reading comprehension, and somewhat smaller but still notable ones in reading speed.

3.1.(b) The differences in the scores in the Reading achievement test between the children of qualified town workers and the rural children were larger still. The mean scores were:

Groups	M	SD	F-test	p
Q	56.86	19.98	166.55	.001
R	34.38	14.62		

Here again, the hypothesis is confirmed. The children of qualified town workers proved to be significantly better readers than the rural children. There are large differences between the two groups in vocabulary and reading comprehension, and somewhat smaller ones in reading speed.

The comparison shows clearly that the rural children are not nearly as accomplished in reading as their town age-mates. This shortcoming is substantial enough to hinder many of them considerably in learning school subjects and in learning in general.

Slovene language achievement

1.1. The town children received the following scores in the Slovene language achievement test:

Groups	M	SD	F-test	p
T-1	111.34	13.87	.49	n.s.
T-2	110.60	15.13		
T-3	110.07	14.15		

The hypothesis is rejected. The children from large and small towns did not differ significantly in mastering their mother tongue.

1.2. Neither was there any support for the hypothesis from the teachers' marks. These were as follows:

Groups	M	SD	F-test	p
T-1	3.62	1.10	1.76	n.s.
T-2	3.77	1.01		
T-3	3.83	.96		

The children from large and small towns received approximately the same marks. The differences between towns are small and do not figure significantly either in the objective test or in the school marks.

2.1. The rural children received the following scores in the Slovene language achievement test:

Groups	M	SD	F-test	p
R-1	98.45	13.67	5.22	.05
R-2	94.20	13.34		

There is enough support for the hypothesis. The children from semi-peasant areas scored significantly higher than their age-mates from peasant areas. From the educational point of view however, these differences do not have much bearing.

2.2. The school marks received by the two groups of rural children in Slovene language did not reflect the actual state of affairs, i.e. they did not reveal any significant differences between them. The mean marks were:

Groups	M	SD	F-test	p
R-1	3.40	1.02	.47	n.s.
R-2	3.31	.98		

The hypothesis must be rejected. The two groups were given approximately the same marks even though the R-1 children did significantly better in the objective test.

3.1.(a) The children of unqualified town workers and the rural children received the following Slovene language achievement test scores:

Groups	M	SD	F-test	p
U	103.37	13.08	24.16	.001
R	96.38	13.68		

The hypothesis is confirmed. The children of unqualified town workers proved to have a significantly better command of their mother tongue than their rural age-mates.

3.2.(a) The teacher-assigned marks present quite the opposite picture. The mean marks were as follows:

Groups	M	SD	F-test	p
U	3.13	.95	4.01	.05
R	3.35	1.00		

The hypothesis is rejected as the rural children obviously received significantly higher marks than the children of unqualified town workers, even though in the achievement test the latter excelled.

3.1.(b) The achievement test scores in Slovene for the children of qualified town workers' and the rural children were as follows:

Groups	M	SD	F-test	p
Q	109.53	14.60	81.82	.001
R	96.38	13.68		

The hypothesis is confirmed. The difference between the two groups is significant and from the educational point of view quite noteworthy.

3.2.(b) The teachers' marks also give evidence of this discrepancy. The mean marks were as follows:

Groups	M	SD	F-test	p
Q	3.71	.97	14.23	.001
R	3.35	1.00		

The hypothesis is confirmed. The children of qualified town workers received significantly higher marks than the rural children. It should be noted however, that the school mark differences were substantially smaller than those produced by the objective test.

The Achievement test scores indicated that the children of both qualified and unqualified town workers have a considerably better command of the Slovene language than do the rural children. The latter are consequently in a much more difficult situation when it comes to learning not only Slovene, but virtually any subject where linguistic ability is required.

The differences between urban and rural children are not so noticeable, however, as regards the school marks that the children received for this subject. The ambiguous case of the children of unqualified town workers who were given lower marks than the rural children, even though they excelled significantly in the objective test, is quite an illustrative example. We assume this anomaly to be the consequence of unequal marking criteria applied by town and rural teachers. Here it should be noted that it is the town schools that are the more demanding.

Mathematics achievement

1.1. The town children received the following scores in the Mathematics achievement test:

Groups	M	SD	F-test	p
T-1	22.77	7.25		
T-2	23.64	6.87	.61	n.s.
T-3	23.03	6.99		

The hypothesis is rejected. The children from large and small towns in general do not differ significantly in their knowledge of Mathematics. There is, however, a significant Towns x SES interaction. The highest scores were obtained by professional workers' children from small towns T-3, and somewhat lower ones by their age-mates from T-1 and T-2. Among qualified workers' children, the highest scores were obtained by T-2 children, followed by T-1 and T-3 children. Among unqualified workers' children, the highest scores were obtained by T-3 children, followed by T-2 and T-1 children.

1.2. Neither did school marks provide any support for the hypothesis. The mean marks on the subject were:

Groups	M	SD	F-test	p
T-1	3.41	1.11		
T-2	3.67	1.12	2.58	n.s.
T-3	3.64	1.10		

The differences between the two town groups are small and statistically not significant.

2.1. In the same way there are no significant differences between the two rural groups. The mean scores in the Mathematics achievement test were as follows:

Groups	M	SD	F-test	p
R-1	16.93	6.70	.48	n.s.
R-2	16.32	6.35		

The hypothesis is not confirmed. There was hardly any difference between the R-1 and R-2 children in the Mathematics achievement test.

2.2. Moreover, the school marks produced no difference whatsover. The mean marks were as follows:

Groups	M	SD	F-test	p
R-1	3.36	1.05	.00	n.s.
R-2	3.36	1.00		

In conclusion, the hypothesis must be totally rejected. The children from both rural areas received exactly the same mean scores.

3.1.(a) Significant differences emerged when comparing the achievement test results of unqualified town workers' children and the rural children. The mean scores were:

Groups	M	SD	F-test	p
U	19.67	6.08	19.85	.001
R	16.63	6.54		

The hypothesis is confirmed. The children of unqualified town workers displayed a significantly better knowledge of Mathematics than did the rural children.

3.2.(a) The school marks, on the other hand, seemed to indicate the very opposite. The mean marks were:

Groups	M	SD	F-test	p
U	2.90	1.01	16.51	.001
R	3.36	1.03		

The hypothesis must be rejected. The rural children were given higher marks than unqualified town workers children even though the latter scored significantly higher in the objective test.

3.1.(b) Differences in the achievement test scores are greater still when the children of qualified town workers and their rural age-mates are compared. The mean scores were as follows:

Groups	M	SD	F-test	p
Q	22.74	6.75	79.60	.001
R	16.63	6.54		

The hypothesis is strongly confirmed. The children of qualified town workers have a significantly better knowledge of Mathematics than the rural children. From the educational standpoint these differences are quite remarkable.

3.2.(b) When dealing with the school marks, however, these differences did not appear. The mean marks were as follows:

Groups	M	SD	F-test	p
Q	3.53	1.08	2.87	n.s.
R	3.36	1.03		

The hypothesis is not confirmed. While objective test results did produce significant differences between the two groups, this was not the case with the school marks. The children of qualified town workers did receive somewhat higher marks than the country children, yet the difference is not large enough to be statistically significant.

In conclusion it can be stated that the town children both of qualified and unqualified workers have a remarkably better knowledge of Mathematics than the rural children; from the educational point of view the gap is quite large. This state of affairs is not reflected in the school marks, however, where these differences are rather obscured. So it happened, for example, that the children of unqualified town workers received lower marks than the rural children even though they excelled significantly in achievement test. The same general trend was observed in the case of qualified town workers' children. Variability in the marking criteria has clearly manifested; the rural teachers use milder criteria than do their town collegues in marking their pupils' performance.

Social Studies

1.1. In the Social Studies achievement test the three groups of town children received the following mean scores:

Groups	M	SD	F-test	p
T-1	34.80	7.75		
T-2	36.13	8.20	1.23	n.s.
T-3	35.03	8.18		

The hypothesis is rejected as the children from large and small towns proved to have a more or less equal command of the subject.

1.2. Neither did the school marks suggest any significant differences between them. The mean marks were as follows:

Groups	M	SD	F-test	p
T-1	3.64	1.11		
T-2	3.81	1.05	2.21	n.s.
T-3	3.87	1.03		

The distribution is quite similar to that in the achievement test. The children from large and small towns received approximately the same marks in the subject.

2.1. In the same way there were no significant differences between R-1 and R-2 children in the Social Studies achievement test. The mean scores were:

Groups	M	SD	F-test	p
R-1	28.42	7.82	1.23	n.s.
R-2	27.32	7.82		

The hypothesis is not confirmed. The children from semi-peasant and from peasant areas exhibited an approximately equal command of the subject.

2.2. The teacher-assigned marks present a similar picture. The children were give the following marks:

Groups	M	SD	F-test	p
R-1	3.24	1.09	.72	n.s.
R-2	3.30	1.07		

The two groups of rural children did not differ significantly in the school marks received for the subject.

3.1.(a) The Social Studies achievement test revealed, however, significant differences between unqualified town workers' children and the rural children. The mean scores were:

Groups	M	SD	F-test	p
U	32.07	8.22	24.13	.001
R	27.88	7.84		

The hypothesis is confirmed. Compared with their rural age-mates, the town children excelled significantly.

3.2.(a) Here again, the teachers' marks for the subject present quite a different picture. The mean marks were as follows:

Groups	M	SD	F-test	p
U	3.18	1.01	2.31	n.s.
R	3.36	1.08		

The hypothesis is rejected. The school marks did not suggest any differences between the two groups, even though in the achievement test unqualified town workers' children excelled significantly.

3.1.(b) Even greater differences emerged when comparing the objective test scores of qualified town workers' children with those of the rural children. The mean scores were:

Groups	M	SD	F-test	p
Q	34.23	7.87	62.06	.001
R	27.88	7.84		

The hypothesis is confirmed. Qualified town workers' children received significantly higher scores than their rural agemates.

3.2.(b) The differences were indicated by the school marks as well. These were as follows:

Groups	M	SD	F-test	p
Q	3.68	1.01	9.58	.01
R	3.36	1.08		

The children of qualified workers were given significantly higher marks than the rural children. It should be noted, however, that the school mark differences were smaller than those produced by the objective test.

The scores on this subject also revealed significant differences in the knowledge between urban and rural children. The school mark differences, however, are considerably smaller or non-existent. This fact can be explained if we consider that urban teachers do not use the same criteria for marking their pupils' performance as do rural teachers.

Natural Sciences

1.1. The town children received the following means scores in the Natural Sciences achievement test:

Groups	M	SD	F-test	p
T-1	41.95	9.52	2.87	n.s.
T-2	43.64	9.94		
T-3	41.27	9.02		

The hypothesis is rejected. There were only slight and not significant differences between the children from large and small towns.

1.2. There were, however, significant differences between towns when it came to teacher- assigned marks. The mean marks were:

Groups	M	SD	F-test	p
T-1	3.74	1.01		
T-2	3.89	1.00	3.47	< .05
T-3	4.03	.96		

The hypothesis is rejected as the small town children received higher school marks than those from large towns. It should be said, however, that these differences, even though significant, were not very pronounced.

2.1. The two groups of rural children received very much the same scores in the Natural Sciences achievement test. They were as follows:

Groups	M	SD	F-test	p
R-1	37.07	9.01	1.04	n.s.
R-2	35.87	8.19		

The hypothesis is rejected. The differences between R-1 and R-2 children are small and statistically not significant.

2.2. Nor did the school marks confirm the hypothesis. The rural children received the following marks:

Groups	M	SD	F-test	p
R-1	3.72	.90	.92	n.s.
R-2	3.60	.95		

There were no significant differences in the rural children's school marks for Natural Sciences.

3.1.(a) A comparison between the achievement test scores of unqualified workers' children and those of rural children revealed the following:

Groups	M	SD	F-test	p
U	38.11	8.92	2.82	n.s.
R	36.48	8.63		

The differences being only slight and statistically not significant, the hypothesis is rejected.

3.2.(a) The teachers' marks, on the other hand, did produce significant differences between the two groups. The mean marks were:

Groups	M	SD	F-test	p
U	3.33	.95	10.16	.01
R	3.67	.93		

The differences are significant but the hypothesis is not confirmed as it was the rural children who scored higher than unqualified town workers' children. It is interesting, though, that the achievement test revealed no significant diferences between them.

3.1.(b) Differences in the command of the subject appeared, however, when comparing the achievement test scores of qualified town workers' children with those of the rural children. The mean scores were:

Groups	M	SD	F-test	p
Q	41.48	9.57	28.62	.001
R	36.48	8.63		

The hypothesis is confirmed as the town group scores significantly higher than the rural group.

3.2.(b) The school marks once again indicated no significant differences between the two. The mean marks were as follows:

Groups	M	SD	F-test	p
Q	3.83	.96	3.26	n.s.
R	3.67	.93		

The hypothesis is confirmed as the children of qualified town workers and the rural children received approximately the same marks. In the achievement test, however, the former excelled significantly.

It is interesting that in Natural Sciences the differences between urban and rural children were smaller than those found in other subjects. This can be explained when we consider that the rural children live in a closer contact with nature which provides them with ample opportunities to explore and learn in this field.

The school marks for Natural Sciences, however, reflected the same tendency that we have already mentioned in connection with, other subjects. The rural teachers were not as critical in marking of their pupils' performance as were their town colleagues. It should be pointed out, however, that this tendency was not as pronounced here as it was in the previously mentioned subjects.

Grade point average

Grade point average for each pupil was calculated on the basis of the school marks received by the pupil at the end of the school year for the following subjects: Slovene language, Mathematics, Social Studies and Natural Sciences.

1.2. The children from large and small towns had the following Grade point average:

Groups	M	SD	F-test	p
T-1	3.61	1.01		
T-2	3.78	.96	2.82	n.s.
T-3	3.84	.93		

The hypothesis is rejected. The children from large and small towns had approximately the same Grade point average.

2.2. The children from semi-peasant and peasant areas had the following Grade point average:

Groups	M	SD	F-test	p
R-1	3,46	0,93	.29	n.s.
R-2	3,39	0,87		

The hypothesis is rejected again. The R-1 and R-2 children had approximately the same Grade point average and the groups did not differ significantly.

3.2.(a) Significant differences emerged when comparing the scores of unqualified town workers' children with those of the rural children. The comparison revealed the following:

Groups	M	SD	F-test	p
U	3.13	.88	8.97	.01
R	3.43	.90		

The hypothesis was based on the assumption that the town children would have a higher Grade point average than their rural age-mates. However, the results obtained revealed the very opposite. The hypothesis was therefore rejected.

3.2.(b) A comparison between qualified town workers' children and the rural children revealed the following:

Groups	M	SD	F-test	p
Q	3.69	.91	8.25	.01
R	3.43	.90		

The hypothesis is confirmed as the two groups differed significantly in their Grade point average. Qualified town workers' children had a higher Grade point average than their rural age-mates.

As can be seen from the results, unqualified town workers' children had a lower Grade point average than the rural children although the latter did considerably worse in the achievement tests. Qualified town workers' children had higher marks than their rural agemates but the former had essentially higher scores in the achievement test than the latter. It can be stated again that achievement test results are not in agreement with the urban and rural teachers' marks.

Intellectual abilities

1.3. The town children received the following scores for the non-verbal intelligence test:

Groups	M	SD	F-test	p
T-1	46,06	12.18		
T-2	45.86	12,38	.51	n.s.
T-3	44,91	12.75		

The hypothesis is rejected as the town children from large and small towns received practically the same scores.

2.3. Neither are there any significant differences between the two groups of rural children. The mean scores were:

Groups	M	SD	F-test	p
R-1	34.14	12.46	2,01	n.s.
R-2	31.86	11.37		

The hypothesis is rejected. The children from semi-peasant and peasant areas received approximately the same scores in the intelligence test.

3.3.(a) There were, however, significant differences in intellectual abilities between the children of unqualified town workers and the rural children. The mean scores were as follows:

Groups	M	SD	F-test	p
U	40.77	11.53	39.32	.001
R	33.01	11.97		

The hypothesis is confirmed. The children of unqualified town workers had significantly more developed intellectual abilities.

3.3.(b) The difference between the children of qualified town workers and the rural children was greater still. The results revealed the following:

Groups	M	SD	F-test	p
Q	44.95	12.23	94.25	.001
R	33.01	11.97		

The hypothesis is confirmed; there is a great difference in intellectual development between the two groups.

The results indicated that the differences in intellectual development between urban and rural children are relatively large in spite of the fact that the children come from families with the same or very similar socio-economic status.

Occupational aspirations and expectations

We also examined the children's occupational aspirations. For the purpose of this investigation we used a six-point rating scale in which a lower numeral value stands for higher occupational aspirations. In addition, we examined the children's occupational expectations, using the same rating scale.

1.4. Town children displayed the following occupational aspirations:

Groups	M	SD	F-test	p
T-1	2.59	1.38		
T-2	2.89	1.29	6.92	.001
T-3	3.09	1.24		

The hypothesis is confirmed. The children from large towns displayed significantly higher occupational aspirations than their small town age-mates.

The same tendency was to be found in occupational expectations. The mean scores were:

Groups	M	SD	F-test	p
T-1	2.72	1.47		
T-2	3.10	1.22	8.59	.001
T-3	3.32	1.32		

Again, the hypothesis is not entirely confirmed. The highest occupational expectations were displayed by T-1 children, followed by T-2 and T-3 children respectively. There is a significant difference between T-1 and T-2 children and between T-1 and T-3 children while the difference between T-2 and T-3 children is not statistically significant. There was, however, one Towns x Sex interaction. T-2 boys have higher occupational expectations than T-3 boys. The picture is quite opposite for the girls, however; T-3 girls displayed higher expectations than T-2 girls.

2.4. There were no significant differences in occupational aspirations between the two groups of rural children. Their results were as follows:

Groups	M	SD	F-test	p
R-1	3.74	.90	.32	n.s.
R-2	3.82	1.01		

The hypothesis is rejected. The children from semi-peasant and peasant areas had approximately the same, rather low, occupational aspirations.

There were however, significant differences regarding occupational expectations. The mean scores were:

Groups	M	SD	F-test	p
R-1	3.74	1.00	5.13	.05
R-2	4.02	.89		

The hypothesis is confirmed. The R-1 children scored higher in occupational expectations but the differences did not amount to much.

3.4.(a) There were significant differences between the children of unqualified town workers and rural children with regard to occupational aspirations. The mean scores were:

Groups	M	SD	F-test	p
U	3.27	1.31	18.99	.001
R	3.78	.96		

The hypothesis is confirmed. Unqualified town workers' children displayed significantly higher occupational aspirations and also greater variability. They wish to achieve the following occupations: professional worker with completed college or university education 36.6%, professional worker with completed secondary school 11.4%, qualified worker 52.0%. Rural children wish to achieve the following occupations: professional worker with completed college or university education 15.9%, professional worker with completed secondary school 13.2%, qualified worker 66.8%. It is interesting that only 4.1% of the rural children wished to work as peasants.

Significant differences between the two groups were to be found in occupational expectations as well. The mean scores were as follows:

Groups	M	SD	F-test	p
U	3.47	1.29	12.08	.001
R	3.87	.95		

The hypothesis is confirmed. The children of unqualified town workers displayed significantly higher occupational expectation than did the rural children.

3.4.(b) The differences in occupational aspirations between the children of qualified town workers and rural children was greater still. The mean scores were:

Groups	M	SD	F-test	p
Q	2.98	1.29	42.43	.001
R	3.78	.96		

The hypothesis is confirmed. The children of qualified town workers had significantly higher occupational aspirations than did their rural age-mates.

The children of qualified town workers wished to achieve the following occupations: professional worker with completed college or university education 45.4%, professional worker with completed secondary school 19%, qualified worker 35.6%.

Comparing these data with those for the rural children we found that the children differed considerably in their occupational aspirations.

Generally speaking, it would seem that the town children, both of qualified and unqualified workers, wish to obtain more accomplished occupations demanding higher levels of education.

There were differences between the children of qualified town workers and the rural children concerning occupational expectations as well. The mean scores were:

Groups	M	SD	F-test	p
Q	3.16	1.31	39.03	.001
R	3.87	.95		

The hypothesis is confirmed. The town children displayed significantly higher expectations than their rural age-mates. On the whole it is evident than the town children, both of qualified and unqualified workers, had considerably higher occupational expectations than the rural children. Here it should also be noted that the children's occupational expectations were in general somewhat lower than their aspirations.

Educational aspirations

We also examined the children's educational aspirations. The children were questioned about the level of education they would like to achieve. For this purpose a five-point rating scale was used in which a lower numeral value stands for higher educational aspirations, i.e. 1 stands for university education and 5 for primary school.

1.5. The town children displayed the following educational aspirations:

Groups	M	SD	F-test	p
T-1	2.14	1.29		
T-2	2.21	1.24	1.45	n.s.
T-3	2.38	1.29		

The hypothesis is rejected. The children from large town wish to reach a higher level of education than do the children from small towns, although the difference is only slight and statistically not significant.

2.5. Nor were there any significant differences between the two groups of rural children. The mean scores were as follows:

Groups	M	SD	F-test	p
R-1	3.16	1.06	3.43	n.s.
R-2	3.49	.84		

Again, the hypothesis is rejected. The children from semi-peasant areas expressed somewhat higher aspirations though the differences were not statistically significant.

3.5.(a) There were, however, significant differences concerning educational aspirations between the town and rural children. The mean scores were:

Groups	M	SD	F-test	p
U	2.65	1.30	22.59	.001
R	3.34	.96		

The hypothesis is confirmed. The children of unqualified town workers displayed significantly higher educational aspirations than did their rural age-mates. The children of unqualified town workers wished to reach the following level of education: university or college education 40.6%, completed high school 15.4%, various schools for qualified workers 34.2% and primary school 9.8%.

The rural children see their education in different terms. They displayed the following aspirations: university of college education 11.8%, completed high school 16.9%, various schools for qualified workers 48.6% and primary school 22.7%.

3.5.(b) There were even larger differences between the children of qualified town workers and the rural children. The mean scores were:

Groups	M	SD	F-test	p
Q	2.32	1.23	56.70	.001
R	3.34	.96		

The hypothesis is confirmed. An elaborate analysis revealed the following educational aspirations among qualified town workers' children: university of college education 50.0%, completed secondary education 19.7%, various schools for qualified workers 21.2% and elementary school 9.1%. A comparison with the rural children's results showed that these two groups differed significantly: half the children of qualified town workers wished to acquire university or college education, while among the rural children there were very few (11.8%) with such aspirations. Nearly half the rural children wished to attend schools for qualified workers.

In conclusion it can be stated that the children of both qualified and unqualified town workers wish to acquire a better education than the rural children.

Study habits

These were examined by means of a special questionnaire with 75 questions to be answered by pupils. The higher the number of points gained, the better the study habits.

1.6. The town children received the following mean scores:

Groups	M	SD	F-test	p
T-1	55.92	9.75		
T-2	57.90	9.34	1.38	n.s.
T-3	56.48	8.66		

The hypothesis is rejected. The children from large and small towns did not differ significantly in their study habits.

2.6. Nor were there any significant differences in study habits between the children from both rural areas. The mean scores were:

Groups	M	SD	F-test	p
R-1	52.82	8.51	2.66	n.s.
R-2	50.96	8.33		

The hypothesis is not confirmed. The R-1 and R-2 children had more or less equally developed study habits.

3.6.(a) In the same way there were no significant differences between the children od unqualified town workers and the rural children. The mean scores were as folows:

Groups	M	SD	F-test	p
U	53.27	8.96	2.71	n.s.
R	51.91	8.47		

The hypothesis is rejected as the two groups received much the same scores for study habits.

3.6.(b) There were considerable differences in study habits between the children of qualified town workers and the rural children. The mean scores were:

Groups	M	SD	F-test	p
Q	57.07	8.80	36.64	.001
R	51.91	8.47		

The hypothesis is confirmed. The children of qualified town workers have better study habits than their rural age-mates.

In conclusion, it can be stated that there are only slight, if any, differences between the town and rural children regarding study habits. Therefore, we believe that the main reason for the differences in academic achievement between urban and rural children is to be sought in other factors than study habits.

Style of learning

The children's style of learning was examined as well. The issue was whether children learn with understanding, applying the learning material in solving similar or new problems and whether they are critical in learning.

1.7. The teachers from large and small towns gave their pupils the following scores for style of learning:

Groups	M	SD	F-test	p
T-1	17.55	4.81	1.55	n.s.
T-2	18.16	4.36		
T-3	18.33	4.24		

The results did not confirm the hypothesis. There were no significant differences in style of learning between the children from large and small towns.

2.7. Neither were there any significant differences between the children from the two rural areas. The mean scores were as follows:

Groups	M	SD	F-test	p
R-1	17.18	4.43	.43	n.s.
R-2	17.59	4.28		

The hypothesis is rejected as the teachers gave their pupils approximately the same scores.

3.7.(a) There were, however, significant differences between the children of unqualified town workers and the rural children. The mean scores were:

Groups	M	SD	F-test	p
U	15.57	3.98	16.00	.001
R	17.38	4.36		

The hypothesis was based on the assumption that the town children would have a better style of learning than their rural age-mates. The results obtained revealed the very opposite. The rural teachers gave their pupils significantly higher scores for style of learning than did their town colleagues. Therefore, the hypothesis must be rejected.

3.7.(b) There were no differences in style of learning between the children of qualified town workers and rural children. The mean scores were as follows:

Groups	M	SD	F-test	p
Q	17.68	4.40	.63	n.s.
R	17.38	4.36		

The hypothesis is again rejected. The rural teachers gave their pupils approximately the same scores as did their town colleagues.

It can be seen from the results than the rural teachers presented a relatively high evaluation of their pupils' style of learning. As stated before, the town children did much better in achievement tests as well as in non-verbal intelligence tests, and consequently we expected to find that they would also have a better style of learning but this was not confirmed. We believe, however, that the results should not be taken at face value, as it is highly probable that the rural teachers did not evaluate their pupils, quite realistically.

Social Behavior

The children's social behavior was examined by means of a questionnaire which included five questions on this subject. The frequency at various types of behavior was estimated by the teachers by means of a five-point rating scale in which a higher numeral value stands for more suitable social behavior and vice versa.

1.8. The town teachers gave their pupils the following scores for social behabior:

Groups	M	SD	F-test	p
T-1	20.00	3.30	1.82	n.s.
T-2	20.71	3.03		
T-3	20.31	3.16		

The hypothesis is rejected. The town groups did not differ significantly in social behavior. At the same time it can be noted that the teachers gave their pupils a relatively high scores for social behavior.

2.8. The children from both rural areas were evaluated as follows:

Groups	M	SD	F-test	p
R-1	19.93	3.81	1.74	n.s.
R-2	20.61	3.38		

The hypothesis must be rejected one more. According to their teachers the children from semi-peasant and peasant areas did not differ significantly in social behavior. The rural teachers also gave their pupils remarkably high scores for social behavior.

3.8.(a) A comparison between the children of unqualified town workers and their rural age-mates revealed the following:

Groups	M	SD	F-test	p
U	19.05	2.96	10.78	.001
R	20.26	3.62		

The hypothesis is confirmed. The results indicated that, on the whole, the rural children are more sociable than the children of unqualified town workers. An analysis of individual questions revealed that the rural children communicate better with their school-mates and participate more successfully in common activities than do the town children.

3.8.(b) A comparison between the children of qualified town workers and their rural age-mates revealed a different picture. The mean scores were as follows:

Groups	M	SD	F-test	p
Q	20.24	3.34	.00	n.s.
R	20.26	3.62		

The hypothesis is rejected. The two groups did not differ significantly in social behavior.

The results indicated that the rural children communicate better with their school-mates and are socially more succesful than the children of unqualified town workers. The children of qualified town workers, however, received much the same scores as did the rural children. It has been stressed previously that both the rural and urban teachers gave quite a favourable evaluation of their pupils' social behavior. An elaborate analysis revealed that 70% of qualified and unqualified workers' children exhibited suitable social behavior very often or always, 22% sometimes and 8% very rarely or never. The picture was similar for the rural children. 74% exhibited suitable social behavior very often or always, 17% sometimes and 9% very rarely or never.

Aggressive Behavior

The children's aggressive behavior was reported on by their teachers. The questionnaire included three questions on the subject and a five-point rating scale was used, in which a higher numeral value stands for more frequent, and a lower numeral value for less frequent aggressive behavior.

1.9. The town children received the following scores:

Groups	M	SD	F-test	p
T-1	13.12	1.89		
T-2	13.45	1.62	1.64	n.s.
T-3	13.36	1.86		

The hypothesis is rejected. Aggressive behavior appeared to be equally frequent in the children from large and small towns.

2.9. Nor were there any differences between the children from the two rural areas. The mean scores were:

Groups	M	SD	F-test	p
R-1	13.17	1.80	3.29	n.s.
R-2	13.55	1.74		

The hypothesis is not confirmed as the two groups did not differ significantly in aggressive behavior.

3.9.(a) Nor were there any differences in this respect between the children of unqualified town workers and their rural age-mates. The mean scores were as follows:

Groups	M	SD	F-test	p
U	13.00	1.89	2.74	n.s.
R	13.35	1.78		

The hypothesis is not confirmed. The two groups did not differ significantly in aggressive behavior.

3.9.(b) Again, no differences were found between the children of qualified town workers and the rural children. The mean scores were:

Groups	M	SD	F-test	p
Q	13.38	1.76	.11	n.s.
R	13.35	1.78		

In conclusion it can be statet that aggressive behavior in both urban and rural children is relatively rare. An elaborate analysis revealed that in 78% of qualified and unqualified workers' children aggressive behavior is observed very rarely or never, in 17% sometimes, and in 5% very often or always. The picture was similar for the rural children. In 80% of these, agressive behavior was observed very rarely or never, in 15% sometimes and in 5% very often or always.

Restless behavior

The questionnaire included five questions on various forms of restless behavior. A five-point rating scale was used in which a higher numeral value stands for less frequent, and a lower numeral value for more frequent restless behavior.

1.10. The urban teachers gave their pupils the following scores:

Groups	M	SD	F-test	p
T-1	19.40	3.55		
T-2	19.60	3.45	.08	n.s.
T-3	19.59	3.71		

The hypothesis is not confirmed as the children from large and small towns did not differ significantly in restless behavior.

2.10. The rural children received the following scores:

Groups	M	SD	F-test	p
R-1	20.24	4.15	.52	n.s.
R-2	19.85	4.11		

The hypothesis is rejected once again. The children from semi-peasant and from peasant areas did not differ significantly in restless behavior.

3.10.(a) There were no differences between the children of unqualified town workers and the rural children. The mean scores were:

Groups	M	SD	F-test	p
U	19.18	3.60	3.46	n.s.
R	20.05	4.13		

The hypothesis is rejected. The two groups did not differ significantly in restless behavior.

3.10.(b) Nor were there any differences between the children of qualified town workers and rural children. The mean scores were as follows:

Groups	M	SD	F-test	p
Q	19.56	3.49	1.21	n.s.
R	20.05	4.13		

The hypothesis is again rejected as the two groups did not differ significantly in restless behavior.

In conclusion, it can be stated that restlessness is quite rare in both urban and rural children. In 63% of town children from families of qualified and unqualified workers, restless behavior in school is observed very rarely or never, in 27% sometimes, and in 11% very often or always. The picture was similar for rural children. In 69% of these restless behavior in school is observed very rarely or never, in 20% sometimes and in 11% very often or never.

Anxiety symptoms

Anxiety in pupils was estimated by the teachers by means of a questionnaire that included five questions on the subject. A five-point rating scale was used in which a higher numeral value stands for less frequent, and a lower numeral value for more frequent occurrences of anxiety symptoms.

1.11. The town children's results were as follows:

Groups	M	SD	F-test	p
T-1	16.94	3.70		
T-2	17.31	3.59	2.91	n.s.
T-3	17.90	3.67		

The hypothesis is rejected. The differences in occurrence of anxiety symptoms were negligibly small and statistically not significant.

2.11. The children from both rural areas did not differ in this respect either. Their results were as follows:

Groups	M	SD	F-test	p
R-1	17.11	4.36	.34	n.s.
R-2	17.44	4.00		

The hypothesis is rejected again. The differences in accurrence of anxiety symptoms were statistically not significant.

3.11.(a) A comparison between the children of unqualified town workers and their rural age-mates revealed the following:

Groups	M	SD	F-test	p
U	16.51	3.69	3.57	n.s.
R	17.28	4.19		

The results did not confirm the hypothesis. The children of unqualified town workers and rural children did not differ regarding the frequency of anxiety symptoms.

3.11.(b) Nor were there any differences in this respect between the children of qualified town workers and the rural children. The results were as follows:

Groups	M	SD	F-test	p
Q	17.35	3.70	.03	n.s.
R	17.28	4.19		

The hypothesis is not confirmed. The frequency of anxiety symptoms is very much the same for both groups.

In 44% of the urban children of qualified and unqualified workers, anxiety in school was observed very rarely or never, in 39% sometimes and in 17% very often or always. The picture was similar forthe rural children. In 49% anxiety in school was observed very rarely or never, in 32% sometimes, and in 19% very often or always. These results indicated that anxiety in school is a relatively frequent phenomenon.

Neurotic symptoms

The teachers also reported on the pupils' neurotic symptoms. There were five questions on this subject. The frequency of neurotic symptoms was estimated by means of a five-point rating scale in which a higher numeral value stands for **less** frequent, and a lower numeral value for more frequent occurrences of neurotic symptoms.

1.12. The town children's results were as follows:

Groups	M	SD	F-test	p
T-1	22.77	2.68	6.72	.01
T-2	23.30	2.20		
T-3	23.70	1.69		

The hypothesis is confirmed. The T-3 children were reported to exhibit the highest number of neurotic symptoms, followed by T-2 and T-1 children respectively. The differences between towns were significant but not very pronounced.

2.12. The rural children's results were as follows:

Groups	M	SD	F-test	p
R-1	23.77	2.27	.03	n.s.
R-2	23.73	2.11		

The hypothesis is not confirmed. The two groups of rural children did not differ significantly in the frequency of neurotic symptoms.

3.12. A comparison between the children of unqualified town workers and their rural age-mates revealed the following:

Groups	M	SD	F-test	p
U	23.14	2.08	6.42	.01
R	23.75	2.10		

Neurotic symptoms are obviously not as frequent in rural children as they are in children of unqualified town workers. But the difference, although statistically significant, does not amount to much.

3.12.(b) Significant differences were also to be found between the children of qualified town workers and rural children. The mean results were:

Groups	M	SD	F-test	p
Q	23.24	2.33	4.42	.05
R	23.75	7.19		

The hypothesis is confirmed. Neurotic symptoms occur less frequently in rural children than in children of qualified town workers.

In conclusion, it can be stated that neurotic symptoms occur very rarely in both urban and rural children. An elaborate analysis revealed that in 90% of town children of qualified and unqualified workers neurotic symptoms were observed very rarely or never, in 8% sometimes and only in 2% **very** often or always. The picture was similar for the rural children. In 93% of these neurotic symptoms were observed verry rarely or never, in 5% sometimes, and in only 2% very often or always.

DISCUSSION OF RESULTS

1. Differences between children from large and small towns

Achievement test results indicated that there were no significant differences between children from large and small towns concerning their knowledge of the basic school subjects. They displayed more or less equal knowledge of Slovene language, Mathematics, Social Studies and Natural Sciences. The school marks provided a similar picture. Children from large and small towns had on average the same marks in these subjects. Thus it is evident that children from large and small towns do not differ significantly in academic achievement.

In reading achievement, a significant difference was found only between children from large towns T-1 and small towns T-3. Children from T-1 had a slightly larger vocabulary, read faster and had a slightly better comprehension of the text than T-3 children. The magnitude of the mean difference was .32 SD.

As can be seen from the results, the differences in reading achievement are from the educational point of view quite small. This can be seen in the fact that children from large and small towns do not differ significantly in academic achievement.

Considering the results of research in SR Serbia (Ivić, 1976) we expected to find that more urbanized environments would provide more opportunities for the development of children's intellectual abilities than less urbanized environments. Our results, however, did not confirm this hypothesis. Children from large and small towns have more or less equally developed intellectual abilities. It is evident that the size of the town and the level of urbanization do not affect the development of children's intellectual abilities in different ways.

It is then understandable that children do not differ in academic achievement.

Differences between children from large and small towns were found, however, in occupational aspirations. The mean difference between T-1 and T-3 children was .38 SD and between T-1 and T-2 .22 SD. Similar differences were found in occupational expectations; .41 SD between T-1 and T-3 children and .28 SD between T-1 and T-2 children.

The larger the town in which a child lives and goes to school, the more demanding and respectable occupation he would like to have. Our explanation is that industrially and culturally more developed towns provide more opportunities for occupational education and jobs than do smaller and less developed towns. It is our assumption that children from small towns have at this stage of schooling rather limited experience in this respect which probably has a somewhat negative influence of their occupational aspirations and expectations.

Educational aspirations are not quite in accordance with occupational aspirations. The results indicated that children from large and small towns do not differ significantly in their educational aspirations which means that ten-year-olds are not yet able to judge different occupations and the education necessary for them, realistically. These results are more a reflection of children's wishes than of their expericen acquired in the course of schooling and in contacts with the environment.

Children from large and small towns have very much the same style of learning and study habits. Thus it can be stated that different levels of urbanisation and the size of towns affect the forming of ways of learning and study habits in rather the same ways. This is also one of the factors that explains the very similar academic achievement of children from large and small towns.

The research indicated that children from large and small towns did not differ significantly in sociability, aggression, restlessness and anxiety. The only significant difference emerged between T-1 and T-3 children in the case of neurotic symptoms; the former showed more of these than the latter. The mean difference between these two groups was .41 SD. These results do not give rise to concern since the percent of children with these symptoms was comparatively small.

Our hypotheses anticipated differences between children from large and small towns concerning the variables examined. It is interesting that none of the hypotheses was entirely confirmed. Here it should be considered that our methodological approach was a little different from that of other authors. Each sample of town children, i.e. T-1, T-2 and T-3, consisted of the same number of children who were selected with regard to their socio-economic status (SES) so that 1/3 of them were children of professional workers, 1/3 were qualified workers' children and 1/3 were unqualified workers' children. Different SES were thus equally represented in the research and therefore any differences between children from large and small towns can justifiably be considered a result of the effects of different levels of urbanisation and function of towns.

The different size and levels of urbanisation of our towns do not considerably affect the academic achievement, intellectual development and certain other personality characteristics of Slovene children. The results of authors who examined similar questions without selecting samples so that the SES groups would be equally represented, should be treated with a certain reserve. It is well known that large and more developed towns have more professional people and intelectuals than smaller and less developed centers. If the selection of children from these different environments were random, then individual samples would consist of children who would differ very much with regard to SES. If this fact is not considered, the result obtained is more a consequence of the effects of SES than of different levels of urbanisation of environment. This inadequacy was avoided in our research.

It is known that there are differences in the degree of urbanisation and cultural development of Slovene towns selected for the research yet these differences did not have any considerable effect on the variables examined. This means that the size and level of urbanisation of the town in which children live has approximately the same effect on their academic achievement, intellectual development and other personality characteristics. The reason is probably the fact that large and small towns have more or less equally well organized and good elementary schools.

It was also found in our research that teachers from large and small towns do not differ significantly in their level of education and period of teaching. There were very small differences in the number of lessons that the children did not attend and in the distance between school and home. Thus, if schools are similar and approximately equally effective, the effects of different levels of urbanization play approximately the same role in children's personality development and academic achievement.

2. Differences between children from semi-peasant and peasant areas

This sample was taken from two rural areas. The first was described as semi-peasant (R-1); 40% - 75% of the inhabitants in this area were peasant. The second was described as peasant (R-2); more than 75% of its population were peasants. In each of these two groups half of the children had parents who made a living exclusively by farming while the other half had parents who owned a farm but one of the parents (usually the father) had a job in town. Thus the children in the two rural groups, i.e. R-1 and R-2, were in the same position regarding their socio-economic status (SES).

The results indicated that the two groups of children obtained approximately the same scores in achievement tests in Mathematics, Social Studies and Natural Sciences. They did not differ in Reading achievement either. Both groups of children also had approximately the same Grade point average in the basic school subjects. The only expection in the criterion variables of academic achievement emerged in the Slovene language where the children from semi-peasant areas excelled but the differences were from the educational standpoint small.

It is interesting that the two groups of children did not differ in intellectual abilities, style of learning, study habits and occupational and educational aspirations. Their academic achievement was in accordance with these important factors.

Neither were there any significant differences between these two groups in personality characteristics such as sociability, aggression, restlessness, anxiety and neurotic symptoms.

We expected to find differences between children from the two rural areas concerning the variables examined. However, the results indicated that none of the hypotheses was confirmed. Even though we covered two demo-geographically different areas, we found that these differences had no considerable effect on the variables examined.

In conclusion it can be stated that the rural environments, even if demo-geographically different, are comparatively homogenous in their social and cultural effects. Both areas are at approximately the same stage of social, economic and cultural development and also very similar in the way of life of their people. This can also be seen in the development of rural children, particularly in their academic achievement and personality characteristics.

3. *Differences between urban and rural children*

It has been stated earlier that there were no considerable differences between children from large and small towns. Therefore we pooled the town groups of children and treated them together as urban children (U). For the comparison with rural children, professional workers' children were excluded from the urban sample since their parents differed considerably from rural children's parents in the way of education and occupational activities. Qualified and unqualified town workers are closer in this respect to peasants and other workers in the countryside.

It has also been established that children from peasant and semi-peasant areas did not differ significantly in the variables examined. Therefore we pooled the two rural groups and treated them as rural children (R). It should also be emphasised that from each rural area one half of the children we took had parents who made a living exclusively by farming and one half of the children had parents who owned a farm but one of the parents had a regular job outside the farm. These children were treated together as rural children.

a) Differences between children of unqualified town workers and rural children

Achievement test results indicated that children of qualified town workers had a considerably better knowledge than rural children. The mean differences between these two groups were the following: Slovene language .50 SD, Mathematics .47 SD and Social Studies .51 SD. These differences are moderate and approximately the same for all three subjects.

It is interesting that there are no significant differences between these two groups in Natural Sciences. Rural children have more opportunities for observing and studying nature but in this case the social and cultural differences between the two environments did not come to light.

The school marks produced quite the opposite picture. The achievement tests showed that unqualified town workers' children had a better knowledge of school subjects yet their school marks were significantly lower than those of rural children. The mean differences between these two groups were the following: Slovene language .22 SD, Mathematics .37 SD, Natural Sciences .36 SD and Grade point average .33 SD.

Rural teachers use milder criteria for evaluating their pupils' performance than do town teachers. This happens mainly because teachers lack an adequate frame of reference for marking. It is known that teachers divide pupils into more successful and less successful ones within individual classes and schools and that they adapt their criteria to the abilities of children from that particular area. Thus, the same performance would be evaluated more favourably in a village school and more strictly in a town school. If the academic achievement of urban and rural children is compared solely on the basis of their school marks, the picture obtained does not reflect the actual knowledge of pupils realistically. As can be seen from our results, school marks can conceal or even distort differences in the knowledge of urban and rural children.

The greatest differences between these two groups emerged in reading achievement. The mean difference between these two groups was .85 SD. Rural children are obviously much worse readers than unqualified town workers' children. They have a poorer vocabulary, a poorer reading comprehension and they read more slowly. As reading plays an important role in the majority of school subjects, these children do not do so well in school. It is evident that rural children have fewer opportunities for enriching their vocabulary and acquiring a suitable linguistic knowledge than urban children.

The level of urbanisation affects not only the child's linguistic but also his intellectual development. Our hypothesis confirmed this finding. Children of unqualified town workers scored significantly higher on a non-verbal intelligence test than did rural children. The mean difference between the two groups was .63 SD. This difference is comparatively large. Because of their poorer intellectual abilities, rural children are less effective in reading and in acquiring linguistic and mathematical knowledge.

Unqualified town workers' children have higher occupational aspirations and occupational expectations than rural children. The mean difference was .45 SD in occupational aspirations and .35 SD in occupational expectations. The difference in occupational aspirations is moderate, the one in expectations is smaller.

The two groups also differ considerably in educational aspirations. Unqualified town workers' children displayed significantly higher educational aspirations; the mean difference was .58 SD.

It is interesting that the parents of the two groups of children are rather similar with regard to their education and occupational activities while their children differ significantly in educational aspirations. Obviously, the urban environment with its varied and dynamic qualities provides more stimulation and more opportunities for the development and fulfilment of educational and occupational aspirations. Rural children are somewhat deprived in this sense as they live in a duller and less stimulating environment.

We expected to find that unqualified town workers' children who do better in school would also have better study habits than rural children. The results, however, did not confirm this hypothesis. Rural children have approximately the same study habits as unqualified workers' children. The reason for the different academic achievement of these two groups of children can therefore not be sought in study habits but in other factors.

The style of learning is another factor of academic achievement. The results indicated that the style of learning correlates comparatively highly with children's academic achievement. It is surprising that rural teachers gave a more favourable evaluation of their pupils' style of learning than did town teachers concerning unqualified workers' children. The mean difference between these two groups was .42 SD. It is questionable whether rural children really learn with a better comprehension and more critically than unqualified town workers' children. This assumption is not very probable as the latter excelled considerably in achievements tests in the basic school subjects. Rural teachers most probably evaluate their pupils' style of learning too favourably, just as they use milder criteria in marking their knowledge.

It is interesting that rural children excel in sociability. The mean difference between these two groups was .35 SD. This difference is small yet it indicates that rural children have better relations with their school mates, that they like to help one another, and make better members of the school community than unqualified town workers' children. This can be explained considering that rural children make a more homogenous group with lesser social differentiation. Therefore there are smaller emotional distances which beneficially affects the children's self-confidence and co-operation with others. Children of unqualified town workers are in a more difficult position in this respect as there are more successful pupils in their classes so that it is harder for them to be successful and make contacts in such a heterogenous group.

At the same time it might be expected that these children would be more aggressive and restless than rural children, due to their less favourable social and academic position in school. However, no significant differences concerning the variables mentioned were found in the comparison of these two groups. It should be emphasized here that aggressive and restless behavior is generally quite rare in both urban and rural children.

Neither were there any significant differences between rural and unqualified town workers' children concerning anxiety. However, it was found that anxiety is quite a frequent phenomenon in both groups of children; nearly one fifth of them were quite anxious children which gives rise to some concern because anxiety does affect their academic achievement. The correlations between this variable and academic achievement was not high ($r = .30$) yet it should not be neglected. Less anxious children are generally more successful in school and vice versa.

A difference between unqualified town workers' children and rural children was also found in the case of neurotic symptoms which appear less frequently in rural children. The mean difference, however, is not large; it amounts to .28 SD. Urban children are in a more difficult situation in this respect as they are subject to being evaluated with the same criteria used for their mates from more favourable familial environments. Rural children's school mates have approximately the same social status, their parents are peasants or semi-peasants, so they are emotionally less disturbed than urban children. Urban children's tension, on the other hand, can find its outlet in neurotic symptoms.

b). Differences between qualified town workers' children and rural children

Children of unqualified town workers excelled significantly over rural children in their knowledge of the basic school subjects. The difference between qualified town workers' children and rural children was larger still. The mean differences between these two groups were the following: Slovene language .84 SD, Mathematics .84 SD, Social Studies .75 SD and Natural Sciences .53 SD. These differences are very large, particularly those in Slovene language and Mathematics.

The differences between these two groups were even larger in Reading achievement; they amounted to 1.10 SD. Qualified town workers' children have a larger vocabulary, a better reading comprehension and are also faster readers. These differences are from the educational standpoint very large. This is one of the reasons why rural children are less successful in school. If the differences in Slovene language are considered at the same time, it becomes obvious why these children do much worse in other subjects as well. Reading ability and linguistic knowledge contribute largely to successful learning in general. This comparison clearly indicates that the socially and culturally more developed urban environment favourably affects the development of children's linguistic abilities and in this way their academic achievement also.

Children's school marks, however, provide quite a different picture. Even though these two groups of children differ significantly in their knowledge of school subjects, the school mark differences between them are very small or nil. They do not differ in school marks in Mathematics and Natural Sciences. Qualified town workers' children have slightly higher marks in Slovene language where the mean difference is .36 SD and in Social Study .30 SD. The difference in the Grade point average on these subjects is .29 SD. Thus it can be stated that the differences in children's school marks are much smaller than those in the actual knowledge of subjects.

This comparison is again an indication of the fact that rural teachers evaluate their pupils' knowledge with milder criteria than do town teachers. Therefore school marks do not give a realistic picture of the knowledge of urban and rural children. Thus, the academic achievement of children from different demogeographical areas should not be judged on the basis of their marks.

The socially and culturally more developed urban environment also has more stimulating effects on the development of children's intellectual abilities. Qualified town workers' children have more developed intellectual abilities than rural children; the mean difference in the results of the Lorge-Thorndike Intelligence test is .89 SD which is rather large. Thus it can be stated that rural children's less developed intellectual abilities are one of the primary factors that hinder their linguistic and academic achievement. Other authors who also compared intelligence test results of urban and rural children found similar or even larger differences. Vernon (1966) states that the difference in IQ points between children from developed urban areas and those from distant rural areas is 15 points which is about 1 SD. Ivić (1976) came to similar conclusions concerning Serbia children where the difference found also amounted to about 1 SD.

These two groups differ considerably in occupational aspirations and occupational expectations. Qualified town workers' children excel in this respect; the mean difference between these two groups is .68 SD for occupational aspirations and .61 SD for occupational expectations. The difference is comparatively large.

Qualified town workers' children also excel over rural children in educational aspirations; the mean difference is .84 SD. This is a rather large difference. Children of qualified town workers wish to achieve more demanding occupations that require longer schooling; in their professional career they wish to climb one educational level higher in comparison with their fathers' occupations. About two thirds of these children wish to become professional workers which involve occupations that demand university or junior college education or at least completed secondary education. The same tendency was observed in rural children; they also want a better education than their parents had. About two thirds of them wish to become qualified workers while less than a third would like to become professional workers. Here it can be concluded that the degree of social and cultural development of the environment interacting with familial relationships plays an important role in forming children's occupational and educational aspirations. These are one of the primary factors of children's academic achievement.

It was anticipated in this comparison that qualified town workers' children who are better in school would also have better study habits and style of learning than rural children. The results indicate that the former have considerably more developed study habits than the latter. The mean difference is .57 SD. Study habits enable children to learn more easily and successfuly and therefore they are a noteworthy factor in their academic achievement.

There were no significant differences between these two groups in their style of learning. It is possible that they do not differ in this respect or else rural teachers gave too favourable an evaluation of their pupils style of learning in the same way as they used milder criteria for evaluating their knowledge.

It is interesting that there were no significant differences between qualified town workers' children and rural children in the personality characteristics examined. They are approximately equally successful in making contacts with their school mates and in participating in school activities.

Aggressive and restless behavior is equally rarely observed in these two groups of children. Some aggression and restlessness is found in any environment without regard to its level of urbanization and social and cultural development.

Neither were there any differences between these two groups in anxiety. It is surprising, however, that this is a rather frequent phenomenon; it occurs in about one fifth of the children in both groups. Since anxiety has a negative effect on children's social activities and academic achievement, this number of children with anxiety symptoms gives rise to some concern.

The only significant difference was found in neurotic symptoms. This is a more frequent phenomenon in qualified town workers' children; the mean difference is .23 SD. This difference is small and so it can not have any considerable effect on the academic achievement of urban and rural children.

* * *

The findings indicate that unqualified and qualified town workers' children have a much better knowledge of the basic school subjects than rural children. The gratest difference between urban and rural children emerges in reading achievement. Rural children have a poorer vocabulary, they read more slowly and have a poorer reading comprehension than urban children. It seems that the social and cultural environment has a particularly strong influence on children's linguistic development.

Rural children have fewer opportunities for developing their vocabulary and cultivating their speech. Rural people's colloquial language is poorer, often syntactically incorrect and incomplete. The child in his speech development copies these incorrect speech models and consequently he later has difficulties in school where he is expected to use syntactically and semantically correct language both verbally and in written papers. These difficulties are not just beginners' problems;

they last throughout the children's schooling. An urban environment is more stimulating for children's linguistic development as it provides them with richer and more varied models of speech. Children have more opportunities both in school and elsewhere to learn more eloquent and correct ways of expressing themselves. At the same time they have better chances for selecting different kinds of reading material and more time for reading than rural children who in their spare time often have to help their parents.

Because of their poorer reading achievement and linguistic development rural children generally have quantitatively and qualitatively less knowledge than their town age-mates with a similar social status. At the same time it should be considered that achievements in objective testing partly depend on children's reading achievement. These tests are usually written in verbal form, therefore the child must understand the instructions and the task that each item contains.

It can be concluded from our results that the social and cultural environment is inseparably related to the development of children's intellectual abilities. Qualified and unqualified town workers' children scored considerably higher on a non-verbal intelligence test than did rural children. The test covered only pictorial and number symbols therefore reading and other verbal abilities could not have influenced their achievement in this test. Thus these differences between urban and rural children can only be explained by the effects of a differently developed environment. Right from their birth rural children receive less encouragement for intellectual development than do urban children. The rural child has fewer suitable toys, children's books and other means that stimulate the development of these abilities. The rural areas have few kinder-gartens that could compensate for these shortcomings.

The poorer intellectual abilities of rural children affect their reading achievement, linguistic development and academic achievement in general. Yet we are not only dealing with poorer intellectual abilities; the rural child, even if sufficiently intelligent, cannot be compared to the urban child in the way of reading and linguistic achievement if the environment does not provide him with adequate stimulation in this sense.

The degree of social and cultural development also affects children's occupational and educational aspirations. Qualified and unqualified town workers' children excel over rural children in this respect. Aspirations, however, play an important role in children's academic achievement; the child with higher occupational and educational aspirations will be more diligent and will have a better attitude towards school and studying.

In conclusion it can be stated that there are large differences between urban and rural children in reading achievement, in scores in achievement tests, intellectual abilities and occupational and educational aspirations. It is interesting that differences in personality characteristics are either very small or non-existent. In sociability which is a very important factor in children's personality developmend and academic achievement, rural children excel over qualified and unqualified town workers' children if only to a small extent. In other personality characteristics, such as aggression, restlessness and anxiety, urban and rural children do not differ much. Neurotic symptoms, however, are a little more frequent in urban children yet this difference is not large.

We believe that the differences mentioned between urban and rural children originate largely in the degree of social and cultural development of the environment. The level of urbanisation and general development is reflected in familial conditions of urban and rural children. It was found that parents of urban children have many more TV sets than rural parents. 94% of the families of qualified town workers and 83% of the families of unqualified town workers own a TV set while this is the case with only 30% of rural families. 64% of the families of qualified town workers and 56% of the families of unqualified town workers subscribed to a daily paper which was found in only 20% of rural families. A car is owned by 70% of the families of qualified town workers, 32% of unqualified town workers and only 17% of rural families. Every family in town and country owns a radio set. Urban children are generally better provided with material goods and have ampler opportunities for getting to know about culture and the world at large. Besides, rural children have less time for reading newspapers and books and for watching TV as they have to help their parents on the farm.

Some studies indicate that the number of children in the family and the Living space index are related to children's academic achievement (Fraser, 1959, Toličič, 1970). Therefore these variables were examined in our research. Rural families included in our sample consisted of 3·24 children on average while unqualified town workers had 2·34 and qualified town workers had 2.15 children on average. Rural parents generally have more children than urban parents. Here it could be concluded that the larger number of children in rural families hinders these children in their academic achievement. The correlation between these two variables was negative but very low (r = -.15 to -.20 for urban children and r = .02 to -.09 for rural children). This is not quite in accordance with the results of Fraser who obtained a higher negative correlation between these two variables (r = -.45). Thus is our case it cannot be stated that the larger number of children in our rural families hinders these children in their academic achievement.

Rural families do have a larger number of children but they also have a larger number of rooms per person. Calculating the ratio between the number of rooms and the number of family members we obtained the following Living space indexes: .64 for rural families, .69 for families of unqualified town workers and .83 for qualified town workers. In this respect rural families do not differ very much from families of unqualified town workers. Qualified town workers' children have slightly better housing conditions yet this difference is only small. At the same time we found that the correlations between the Living space index and children's academic achievement were in general quite low; they ranged between .01 and .31. Therefore differences in urban and rural children's academic achievement cannot be explained by housing conditions.

Children's academic achievement also depends on other factors. In our research we did not succeed in examining all the relevant educational factors but only some of them that can be treated objectively.

It was expected that the teachers' education and period of teaching would affect the quality of teaching and the work with pupils. The research revealed that the teachers of 4th grade pupils in town and in the rural areas did not differ in the level of their professional training; most of them had a degree from the Pedagogical Academy (junior college).

There was a difference between town and rural teachers in period of teaching. The town teachers' figures were 19 years on average while the rural teachers' figures were 11 years. It can be concluded that town teachers have more professional experience which could possibly have an influence on the quality of their work. This conclusion, however, should be treated with a certain reserve because rural teachers are not beginners; they have, on average, more than ten years of teaching experience behind them.

Warburton (1951) pointed out that in Great Britain pupils in medium size classes were more successful than those in large and small classes. In our sample of schools we found that the average number of pupils in one class was 29 in town schools and 24·5 in rural schools. Classes are smaller in rural schools but they can still be considered medium size. A rural teacher can spend more time with each pupil but even by doing so he cannot eliminate all the consequences caused by a socially and culturally underdeveloped environment.

Absence from lessons could affect the differences in academic achievement of urban and rural children. The results indicated, however, that absence from lessons is a very rare phenomenon at this stage of schooling. The urban children's average was seven hours while the rural children's average was five hours per year. Therefore absence from lessons could not have affected the different academic achievement of urban and rural children.

We were also interested in the distance between school and the children's homes. Children who live far away go to school by bus. Even so, rural children walk much more than do urban children; the former walk about 1.7 km to school while the latter walk 0.5 km on average. It is our belief, however, that rural children are not hindered in their academic achievement because of their somewhat longer journey to school.

We also supposed that better or worse co-operation between parents and the school could also affect children's success in school. Teachers reported that rural parents co-operate better with the school than do unqualified town workers. Qualified town workers do not differ from rural parents in this respect. Thus this factor has not much bearing on children's academic achievement.

In conclusion it can be stated that differences in the academic achievement of urban and rural children are affected particularly by intellectual and motivation factors that interact with the degree of social and cultural development of the environment and with the familial conditions. It is interesting that at this stage of schooling there were no considerable differences between urban and rural schools. Therefore it is our opinion that the large differences in the academic achievement of urban and rural 4th grade children cannot be attributed to the school that they attend. It can be concluded from the results that rural schools, even though they have the same programs as town schools, cannot eliminate the differences between urban and rural children in linguistic and intellectual development and in their knowledge of the basic school subjects. These differences have their origin mostly in the socially and culturally under-developed rural environment, interacting with familial conditions.

DIFFERENCES BETWEEN CHILDREN WITH REGARD TO THE SOCIO-ECONOMIC STATUS OF THE FAMILY

The results of 4th grade pupils

The main purpose of our research was to find out whether there are any significant differences in academic achievement and some personality characteristics among children of families with different socio-economic status. The town children were divided into 3 groups on the basis of their parents' education and occupation: group 1 - professional workers' children (P), group 2 - qualified workers' children (Q), group 3 - unqualified workers' children (U). The formation of the groups with regard to socio-economic status (SES) is presented in detail in the sample description.

Our hypothesis was based on the assumption that children differ significantly with regard to SES. The higher the socio-economic status of the family, the more successfully the children would be excepted to perform in school. They would have more developed intellectual abilities, higher occupational and educational aspirations, better study habits and style of learning and would also differ from children with lower SES in various personality characteristics.

The rural children were originally divided into two groups: first group covered the children whose parents provided for the family ecclusively by farming and second group covered the children of families where the family income came partly from the father's employment as qualified or unqualified worker outside the home, and partly from farming. The results showed, however, that the children from the two country areas did not differ significantly in the variables examined and consequently their results were pooled and treated as rural (R). These results were then compared with those of the children of qualified and unqualified town workers which are presented in the previous chapter. Therefore this chapter deals only with the differences among the town children with regard to SES.

READING ACHIEVEMENT

4.1.* The Reading test results indicate that the children differ significantly with regard to SES. The mean scores were as follows:

Groups	M	SD	F-test	p
P	69.07	19.41		
Q	56.94	19.98	41.80	.001
U	49.67	18.72		

Differences with regard to SES also emerged in individual parts of the Reading test which covered vocabulary, reading speed and reading comprehension.

Vocabulary:

Groups	M	SD	F-test	p
P	23.16	6.58		
Q	19.21	6.42	44.45	.001
U	16.75	5.10		

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*The ciphers correspond with the hypothesis number see page 37.

Reading speed:

Groups	M	SD	F-test	p
P	17.79	5.90		
Q	14.92	5.66	27.92	.001
U	13.15	5.08		

Reading comprehension:

Groups	M	SD	F-test	p
P	28.12	.30		
Q	22.81	8.77	37.20	.001
U	19.77	9.08		

The Reading test results confirmed the hypothesis. Professional workers' children have a significantly larger vocabulary, they read faster and also displayed a better comprehension of the reading material than do the children of qualified and unqualified workers. These two groups, on the other hand, also differed significantly in reading achievement (F = 11.63; p < .001).

As to reading achievement the results indicated that professional workers' children are in the most favourable position, while qualified and unqualified workers' children are at a disadvantage in this respect. The differences are so large as to have a considerable effect on children's learning in school and elsewhere.

SLOVENE LANGUAGE ACHIEVEMENT

4.1. The results of the Slovene language achievement test which comprised 145 questions indicate significant differences among children with regard to SES. The mean results were as follows:

Groups	M	SD	F-test	p
P	118.45	11.14		
Q	109.53	14.60	54.03	.001
U	103.37	13.08		

The hypothesis is confirmed. Professional workers' children have a significantly better knowledge of their mother tongue than the children of qualified and unqualified workers. These two groups differ in their command of Slovene (F = 15.48; p < .001). Significant differences between the groups were found also in variability. The achievements of professional workers' children are not only better but alsc more homogenous than those of qualified and unqualified workers' children.

The differences between the three groups are from the educational point of view rather large. Therefore children with a better knowledge of Slovene also have better possibilities for learning other subjects and for learning on their own.

On the basis of the mean scores it can be concluded that the children did quite well without regard to SES. On average the children of professional workers answered 82% of the questions correctly, qualified workers' children 75% and unqualified workers' children 71%.

4.2. The teachers' marks in this subject confirm the hypothesis as well. The teachers gave their pupils the following marks in Slovene:

Groups	M	SD	F-test	p
P	4.31	.79		
Q	3.71	.97	66.69	.001
U	3.13	.95		

The mean marks of professional workers' children were the highest, those of qualified workers' children were significantly lower while those of unqualified workers' children were lower still. The difference in school marks between qualified and unqualified workers' children is significant and comparatively large ($F = 28.15$; $p < .001$). It is somewhat more pronounced than the difference in achievement test results.

MATHEMATICS ACHIEVEMENT

4.1. The results of the Mathematics achievement test, which comprised 40 questions, indicate significant differences between children with regard to SES. The mean scores were:

Groups	M	SD	F-test	p
P	26.71	6.44		
Q	22.74	6.75	48.48	.001
U	19.67	6.08		

The hypothesis is confirmed. Professional workers' children proved to have a significantly better knowledge of Mathematics than the children of qualified and unqualified workers who also differed significantly in this respect (F = 18.62; $p < .001$). Qualified workers' children received significantly higher scores than did the children of unqualified workers.

An elaborate analysis revealed that the differences between the three groups are small when it comes to tackling the four basic arithmetical operations, somewhat larger in comprehension of arithmetical and geometrical concepts and quite large in solving mathematical problems. The latter demand not only mathematical knowledge but also more developed mental abilities and therefore the children of qualified and particulary those of unqualified workers have difficulties in dealing with this kind of learning material.

The Mathematics achievement test also showed that the level of mathematical knowledge of these children is relatively low. Professional workers' children solved 67% of the problems given, qualified workers' children 57%, and unqualified workers' children only 49%. These results may give the impression that the test was too difficult which is an assumption not entirely acceptable as the test was prepared in accordance with the present educational curriculum. Had the test included fewer aplication problems the scores would certainly have been higher. Even so,it appears that there is insufficient mathematical practice both in school and at home.

4.2. School marks in mathematics confirm the hypothesis as well. The teachers gave their pupils the following marks:

Groups	M	SD	F-test	p
P	4.21	.83		
Q	3.53	1.08	1.69	.001
U	2.90	1,01		

The mean marks of professional workers' children were the highest, those of qualified workers' children were significantly lower and those of unqualified workers' children were lower still. There were significant differences between the mean marks of qualified and unqualified workers' children ($F = 27,45$; $p < .001$). These two groups differed more in the school marks received than in the Mathematics achievement test results. Marking is obviously not done in accordance with objective tests.

SOCIAL STUDIES

4.1. The results of the Social Studies achievement test, which comprised 55 questions, indicated significant differences between children with regard to SES. The mean scores were the following:

Groups	M	SD	F-test	p
P	39.39	6.22		
Q	34.23	7.87	40.72	.001
U	32.07	8.22		

The hypothesis is confirmed. Professional workers' children have a significantly better command of Social Studies than do qualified workers' children, who in turn have better results than unqualified workers' children. It should be stated, however, that in this case the difference between the results of qualified and unqualified workers' children is relatively small, and though statistically significant from an educational point of view, does not amount to much ($F = 5.96$; $p < .05$).

In conclusion it can be stated that the children did quite well in this subject. Professional workers' children answered

72% of the questions correctly qualified workers' children 62% and unqualified workers' children 58%. A detailed analysis revealed that professional workers children are more acquainted with basic facts and concepts, and have a better command of the subject than the children of qualified and unqualified workers.

4.2. Their school marks in this subject also indicate that children differ significantly with regard to SES. The teachers gave their pupils the folloqing marks:

Groups	M	SD	F-test	p
P	4.40	.82		
Q	3.69	1.01	63.90	.001
U	3.13	1.01		

The highest marks were received by professional workers' children, significantly lower were those of qualified workers' children and lower still were those of unqualified workers' children. The difference between the latter two groups (F = 18.99; p < .001) is larger than is indicated by the achievement test results. The school marks in this subject are in general higher than achievement test scores. There were also differences in variability; professional workers' children are more homogenous in their marks than qualified and unqualified workers' children.

NATURAL SCIENCES

4.1. The Natural Sciences achievement test which comprised 65 questions, also indicated significant differences between children with regard to SES. The mean scores were as follows:

Groups	M	SD	F-test	p
P	46.90	7.97		
Q	41.48	9.57	40.27	.001
U	38.11	8.92		

The hypothesis is confirmed. Professional workers' children have a qualitatively and quantitatively better command of Natural Sciences than qualified workers' children who in turn do better than unqualified workers' children; the difference between the latter two groups, however, even though statistically significant, is not large ($F = 10.58$; $p < .01$). Apart from that, the achievements of professional workers' children are more homogenous than those of qualified and unqualified workers' children.

The results of the Natural Sciences achievement test generally indicated a fairly satisfactory level of knowledge. Professional workers' children answered 72% of the questions correctly, qualified workers' children 64% and unqualified workers' children 57%. A detailed analysis showed that the children were more or less equal regarding their knowledge of facts and their capabilities for both comprehending concepts and explaining natural phenomena.

4.2. The school marks also confirmed the hypothesis. The teachers evaluated their pupils as follows:

Groups	M	SD	F-test	p
P	4.44	.75		
Q	3.83	.96	58.64	.001
U	3.33	.95		

Professional workers' children had significantly higher marks than did qualified workers' children while unqualified workers' children had the lowest marks. The difference between the latter two groups was significant (F = 20.46; p < .001). Here again differences in variability were observed. The school marks of professional workers' children are more homogenous than those of qualified and unqualified workers' children.

GRADE POINT AVERAGE

4.2. The Grade point average for each pupils covers the following subjects: Slovene language, Mathematics, Social Studies and Natural Sciences. The results with regard to SES were as follows:

Groups	M	SD	F-test	p
P	4.34	.72		
Q	3.69	.91	78.30	.001
U	3.13	.88		

The hypothesis is confirmed. Professional workers' children had a significantly higher Grade point average than the children of qualified workers while unqualified workers' children had the lowest Grade point average. The difference between the latter two groups was also significant and relatively large (F = 28.78; p < .001). Apart from that, the groups differ in variability. The school marks of professional workers' children are more homogenous than those of qualified and unqualified workers' children.

INTELLECTUAL ABILITIES

4.3. The mean scores in the Lorge-Thorndike test were as follows:

Groups	M	SD	F-test	p
P	50.67	11.54		
Q	44.95	12.23	28.97	.001
U	40.77	11.53		

The hypothesis is confirmed. The differences in the mean scores were all statistically significant. Professional workers' children have significantly more developed intellectual abilities, followed by qualified and unqualified workers' children respectively. The difference between the latter two groups is also significant (F = 10.66; p < .01). There was also a SES x Sex interaction. Boys from qualified workers' families excel in intellectual abilities over the boys from families of unqualified workers' families while girls from these two SES groups do not differ in this respect.

It is evident that professional workers' children have better possibilities for learning in school and elsewhere than their age-mates from families of qualified and unqualified workers. The differences between the latter two groups are also large and may affect the children's general academic achievement.

OCCUPATIONAL ASPIRATIONS AND EXPECTATIONS

4.4. As to occupational aspirations, significant differences were found among the children with regard to SES. The mean results were as follows:

Groups	M	SD	F-test	p
P	2,35	1.18		
Q	2.98	1.29	23,16	.001
U	3.27	1,31		

The hypothesis is confirmed. The highest occupational aspirations were expressed by professional workers' children, those of qualified workers' children were significantly lower and those of unqualified workers' children were lower still. The latter two groups also differed significantly in this respect ($F = 4.27$; $p < .05$).

It should be stated, however, that the occupational aspirations of unqualified workers' children were not low. As stated in the previous chapter almost 50% of them would like to become professional workers with completed secondary school or college education (see page 103). It is interesting that their aspirations were considerably higher in comparison with the occupations of their fathers who were on our six-point rating scale assigned 5.51 points. These children hoped to rise for 2.24 points.

The occupational aspirations of qualified workers' children were comparatively high; approximately 64% of them would like to become professional workers with completed college or university education (see page 104). In comparison with the occupations of their fathers who were on our six-point rating scale assigned 4.46 points, these children hoped to rise for 1.48 points.

The occupational aspirations of professional workers' children indicates a close correspondence with the present occupations of their fathers who were on our six-point rating scale assigned 2.50 points. A detailed analysis revealed that 68.5% of these children wish to become professional workers with college or university education 21.8% would like to become professional workers with completed secondary education, while only 9.7% of them would like to become qualified workers.

The children also expressed their ideas about the occupations which they will, in their opinion, actually be able to achieve. These occupational expectations provide a picture similar to that of their aspirations. The mean results were:

Groups	M	SD	F-test	p
P	2.56	1.32		
Q	3.16	1.31	21.34	.001
U	3.47	1.29		

The hypothesis is confirmed. The highest occupational expectations were expressed by professional workers' children, those of qualified workers' children were significantly lowers while those of unqualified workers' children were lower still. The difference between the latter two groups was also significant ($F = 4.27$; $p < .05$).

The results indicate that the children's occupational expectations are somewhat lower than their aspirations. It seems that many of them are already aware that they might not quite be able to realize their occupational aspirations.

EDUCATIONAL ASPIRATIONS

4.5. In the case of educational aspirations, significant differences were found between the children with regard to SES. The mean results were:

Groups	M	SD	F-test	p
P	1.82	1.18		
Q	2.32	1.23	14.33	.001
U	2.65	1.30		

The hypothesis is confirmed. Professional workers' children have significantly higher educational aspirations than qualified workers' children, while the children of unqualified workers come last. The difference between the latter two groups is also significant ($F = 4.17$; $p < .05$).

Professional workers' children proved to have very high educational aspirations; 69.9% of them would like to have college or university education, 11.9% completed secondary school education, 16.3% would like to attend schools for qualified workers, and 2.2% were satisfied with elementary school.

Qualified workers' children also displayed high educational aspirations; about 70% of them would like to have secondary, college or university education (see page 107).

The educational aspirations of unqualified workers' children are, however, not low either. About 56% of them aspire to secondary, college, or university education (see page 106).

STUDY HABITS

4.6. Significant differences were found among the children with regard to SES. The mean results were as follows:

Groups	M	SD	F-test	p
P	59.59	9.00		
Q	57.07	8.80	20.12	.001
U	53.27	8.96		

The hypothesis is confirmed. Professional workers' children have the best study habits, followed by qualified and unqualified workers' children respectively. The difference between the latter two groups is also significant (F = 13.98; p < .001). The differences between the three groups are large and they may well affect the children's general academic achievement.

STYLE OF LEARNING

4.7. The pupils' learning style was estimated by their teachers. The mean results were as follows:

Groups	M	SD	F-test	p
P	20.52	3.61		
Q	17.68	4.40	60.68	.001
U	15.57	3,98		

The hypothesis is confirmed. According to the teachers, professional workers' children have a significantly better learning style than the children of qualified and unqualified workers who also differ significantly in this respect (F = 19.72; p < .001). The results indicate that professional workers' children deal more critically and effectively with problems of learning than do qualified workers' children who in turn do better than unqualified workers' children. Children with a good learning style have possibilities to acquire better knowledge.

SOCIAL BEHAVIOR

4.8. The children's social behavior was estimated by their teachers. The mean scores with regard to SES were as follows:

Groups	M	SD	F-test	p
P	21.57	2.68		
Q	20.24	3.34	27.16	,001
U	19.05	2.96		

The hypothesis is confirmed as the children differed significantly in social behavior. Professional workers' children have in general better relations with their schoolmates and are socially more successful than the children of qualified workers. The latter, on the other hand, are socially more accomplished than unqualified workers' children. The difference between these two groups is also statistically significant (F = 10.82; p < .001).

The results indicate that the teachers gave their pupils quite high scores for social behavior. A detailed analysis revealed that in 87% of professional workers' children, suitable social behavior is observed very often or always, in 11% sometimes, and in 2% very rarely or never. The picture for qualified workers' children is a samewhat different. In 77% of these, suitable social behavior is observed very often or always, in 18% sometimes, and in 5% very rarely or never. As to unqualified workers' children, in 64% of these suitable social behavior is observed very often or always, in 26% sometimes, and in 10% very rarely or never. Here it can be concluded that at asocial behavior in children is relatively rare as the percentage of children with such behavior is within the limits of 2% to 10%.

AGGRESSIVE BEHAVIOR

In this presentation, higher numeral values stand for more frequent aggressive behavior and vice versa.

4.9. Aggressive behavior in children was estimated by their teachers. The mean results with regard to SES were as follows:

Groups	M	SD	F-test	p
P	13.57	1.73		
Q	13.38	1.76	4.24	.01
U	13.00	1.89		

The hypothesis is not entirely confirmed. Professional workers' children less aggressive, than the children of qualified and unqualified workers. The difference in aggressive behavior between qualified and unqualified workers' children is small and statistically not significant (F = 3.07; n.s.). Obviously there are significant differences only between the children of professional and unqualified workers.

The results indicate that aggressive behavior in school is rare. An elaborate analysis showed that in 83% of professional workers' children aggressive behavior is observed very rarely or never, in 14% sometimes and only in 3% very often or always. The picture is similar for qualified workers' children. In 81% of these, aggressive behavior in school is observed very rarely or never, in 17% sometimes and in only 2% very often or always. The picture for unqualified workers' children, however, is somewhat different. In 74% of these aggressive behavior is observed very rarely of never, in 18% sometimes and in 8% very often or always. The percentage of children in whom aggressive behavior is frequently observed is within the limits of 2% - 8%.

RESTLESS BEHAVIOR

4.10. Restlessness in children was estimated by their teachers. In the following presentation, higher numeral values stand for less frequent restless behavior and vice versa. The mean scores with regard to SES were as follows:

Groups	M	SD	F-test	p
P	19.80	3.60		
Q	19.56	3.49	.99	n.s.
U	19.18	3.60		

In this case the hypothesis is not confirmed. The groups do not differ significantly with regard to restless behavior.

A detailed analysis showed that in 68% of professional workers' children restless behavior in school is observed very rarely or never, in 24% sometimes and in 8% very often or always. The picture for qualified workers' children is very similar. In 66% of these, restless behavior in school is observed very rarely or never, in 25% sometimes and in 9% very often or always. Unqualified workers' children appeared to be a little more restless but even with them this type of reaction is not very frequent. In 60% of these children restless behavior is observed very rarely or never, in 28% sometimes and in 12% very often or always. The percentage of children with frequent restless behavior is therefore within the limits of 8% - 12%.

ANXIETY SYMPTOMS

4.11. Anxiety in children was estimated by their teachers.
In the following presentation, higher numeral values stand for less frequent anxiety symptoms and vice versa. The mean results with regard to SES were as follows:

Groups	M	SD	F-test	p
P	18.71	3.44		
Q	17.35	3.70	9.42	.001
U	16.51	3.69		

The hypothesis is confirmed as the groups differed significantly with regard to school anxiety. The least number of anxiety symptoms were observed in professional workers' children, followed by qualified workers' children, and then by unqualified workers' children. The difference between qualified and unqualified workers' children is also significant ($F = 4.46$; $p < .05$).

A detailed analysis revealed that in 55% of professional workers' children anxiety is observed very rarely of never, in 35% sometimes and in 10% very often or always. The picture for qualified workers' children is somewhat different. In 49% of these, anxiety is observed very rarely or never, in 37% sometimes and in 14% very often or always. Most anxiety symptoms were observed in unqualified workers' children. In 39% of these, anxiety in school is observed very rarely or never, in 41% sometimes and in 20% very often or always. Here it can be concluded that anxiety in school is a rather frequent phenomenon - it is observed occasionally in 35% - 41% and very often in 10% - 20%.

NEUROTIC SIMPTOMS

4.12. The children's neurotic symptoms were reported on by their teachers. In this presentation, higher numeral values stand for less frequent occurrencess of these symptoms and vice versa. The mean results with regard to SES were as follows:

Groups	M	SD	F-test	p
P	23.42	2.29		
Q	23.24	2.33	.49	n.s.
U	23.14	2.08		

The hypothesis is rejected. The children do not differ significantly in the frequency of neurotic symptoms.

An elaborate analysis revealed that in 92% of professional workers' children neurotic symptoms are observed very rarely or never, in 7% sometimes and in 2% very often or always. The picture is similar for qualified workers' children. In 91% of these, neurotic symptoms are observed very rarely or never, in 7% sometimes and in 2% very often or always. As to unqualified workers' children, in 89% of these, neurotic symptoms are observed very rarely or never, in 9% sometimes and in 2% very often or always. Thus it can be stated that neurotic symptoms occur very often in 2% of the children and occasionally in 6% - 9% of the children.

DISCUSSION OF RESULTS

The results of our research revealed that children with different SES achieve essentially different levels of success in school. Comparisons of SES groups were particularly interesting as the sample covered the same number of professional, qualified and unqualified workers' children from each school involved in the research project. The children from individual schools attended the same classes and were taught by the same teachers so that the differences between the groups were minimally affected by the variables of the educational medium.

Significant differences were found between SES groups in reading achievement. Professional workers' children proved to be far ahead of unqualified workers' children; the mean difference was as large as .91 SD. They are also better readers than qualified workers' children; the mean difference between these two groups was .59 SD. Qualified and unqualified workers' children also differed in this respect but the difference was small; it amounted to .38 SD in favor of qualified workers' children. The results indicated quite large differences between the groups in vocabulary and reading comprehension and somewhat smaller differences in reading speed.

The socio-economic status of the child's family obviously has a significant influence on the child's linguistic development and reading achievement which was clearly seen from the comparison of professional and unqualified workers' children where the SES gap is the largest. Bernstein (1971) explains this kind of difference with different models of speech used by people with different socio-economic status. Professional workers' speech is syntactically and semantically more adequate and also has a richer vocabulary. Children of more educated parents therefore have better possibilities right from early childhood for learning to express themselves adequately and correctly. Children of less educated parents, once confronted with the school's demands for a syntactically and semantically correct use of the language, find it very difficult to adapt themselves to this new situation; for them, it is almost like learning a foreign language since at home they were considerably deprived in this respect.

Numerous research works have confirmed that childrens' reading achievement correlates highly with their academic achievement. In the case of our town pupils, the correlations are as high as .70. Reading obviously plays an important role in learning school subjects.

Our findings revealed that children with different SES also differ considerably in academic achievement. The greatest differences were again found between professional and unqualified workers' children; the former received remarkably higher average scores in the basic school subjects. The mean differences between these two groups are the following: Slovene language 1.05 SD, Mathematics .98 SD, Social studies .90 SD and Natural sciences .92 SD. Achievement test results obviously show large differences that do not vary much from subject to subject. The differences in school marks, however, are even larger: Slovene language 1.13 SD, Mathematics 1.18 SD, Social studies 1.11 SD and Natural sciences 1.10 SD. It appears that teachers tend to grade unqualified workers' children more severely than professional workers' children.

Professional workers' children also have considerably better knowledge of the basic school subjects than qualified workers' children. The mean differences are the following: Slovene language .64 SD, Mathematics .57 SD, Social studies .69 and Natural sciences .59 SD. Here again, the differences in school marks are larger than those in achievement test results. The mean school mark differences are the following: Slovene language .69 SD, Mathematics .67 SD, Social studies .73 SD, and Nature studies .66 SD. It can be stated in this case as well that qualified workers' children are subject to slightly stricter marking criteria than professional workers' children.

The differences in the command of the basic school subjects are smaller when comparing qualified and unqualified workers' children. The mean differences between these two are the following: Slovene language .43 SD, Mathematics .48 SD, Social studies .27 SD and Natural sciences .26 SD. The differences concerning Slovene and Mathematics are still quite large while those concerning Social studies and Natural sciences appeared relatively small. The school mark differences, however, are rather larger: Slovene language and Mathematics .57 SD, Social studies .48 SD and Natural sciences .51 SD. It is evident that unqualified workers' children are subject to slightly stricter marking criteria than qualified workers children.

A child's academic achievement is obviously highly related to the socio-economic status of his parents. In our case it should be underlined that this tendency was felt quite strongly despite the fact that the children were subject to the same educational process and had the same teachers. Hence it can be stated that the influence of the familial,social and cultural environment on the children's linguistic and academic development is so intense that the resulting differences cannot be eliminated even by our primary schools which all have the same nationally curriculum.

Many authors (Bloom, B.C., 1964; Havighurst, R.J., 1971; Wolf, R. M., 1963) emphasize that in early childhood the social and cultural environment has a determinant influence not only on a child's linguistic development but also on the development of other intellectual abilities. Children who live in a less stimulating environment cannot suitably develop their hereditary dispositions into manifest abilities, which is one of the reasons for their poorer academic achievement. These intellectual shortcomings can be crucial for these children as they may not be able to substitute for them in school or later in life.

Our results also indicated significant differences in intellectual abilities among children with different SES. The greatest differences in this respect emerged in the comparison of professional and unqualified workers' children where the mean differences was as large as .79 SD. It is evident that the differences between these two groups in the non-verbal intelligence test are large and in favour of the former group. The mean difference between the results of professional and qualified workers' children are somewhat smaller but still quite large, i.e. .47 SD. Qualified workers' children in turn excel over unqualified workers' children; the mean difference is .34 SD.

Similar differences between our 4th grade (10-year-olds) and 8th grade (14-year-olds) children of professional and qualified workers' were observed in the international research project in 1969. Then we used Raven's progressive matrixes and found that the difference between these two SES groups amounted to about .4 SD. In other words, the testing of two sample (in 1969 and 1973) by means of two different non-verbal intelligence tests produced very much the same results, which means that intellectual ability differences among our children with different SES invariably do appear and also remain comparatively stable. In the above-mentioned international research project it was established that intellectual ability differences among children with different SES were larger in some other countries (USA, Mexico, Japan) than in Yugoslavia. This can be explained by the fact that in our towns the standard of living varies less than it does elsewhere, and moreover, considering that all our children, without regard to SES, attend primary schools that have the same national curriculum and very much the same quality of education.

Similar differences among children with different SES also appeared in their occupational and educational aspirations. Professional workers' children displayed significantly higher occupational aspirations and expectations than unqualified workers' children. The mean difference between these two groups was .69 SD in occupational aspirations and .65 SD in occupational expectations. In educational aspirations it amounted to .64 SD. These differences are obviously rather large. We believe that professional workers' children do better in school on account of their very high aspirations as well, since these present one of the main agents of academic success.

Professional workers' children expressed significantly higher occupational aspirations and expectations than qualified workers' children. The mean difference was .49 SD in occupational aspirations and .44 in occupational expectations. Similarly, the mean difference in educational aspirations amounted to .40 SD. These differences are quite large, which is most probably one of the reasons for the poorer academic success of qualified workers' children.

The smallest differences in occupational and educational aspirations were found between qualified and unqualified workers' children. The former received somewhat higher scores; the mean difference was .22 SD in occupational aspirations, .24 SD in occupational expectations and .20 SD in educational aspirations.

Generally speaking, qualified and unqualified workers' children expressed quite high occupational and educational aspirations in comparison with the present level of their fathers' occupations. The results indicate a considerable occupational mobility among these children who, in the contemporary social establishment, have far better opportunities for completing their education and following a professional career than was the case with their parents.

Professional workers' children also aspire to a better education than their fathers acquired while occupational aspirations are generally on the fathers' level. This is quite understandable since many of these parents hold professions that are very difficult to reach.

Along with the quality of familial environment and intelligence, occupational and educational aspirations play a very important role in a child's academic achievement. These aspirations indicate the degree of the child's motivation for school work, his goals and his attitude towards school in general. As stated earlier, these aspirations proved to be strongly dependent on the socio-economic status of the child's family. More educated parents stimulate the child in his early childhood to engage in various forms of sensory and mental activity and later in learning and developing special interests which in turn stimulates the child's aspirations and enhances his academic achievement. Many unqualified workers' children in early childhood and in the first years of schooling were not provided with adequate stimulation in their intellectual and personality development will most probably not be able tu fulfil all their occupational ambitions.

SES groups also differed in their style of learning and study habits. Professional workers' children were much more advanced in this respect than unqualified workers' children; the mean differences were 1.09 SD in style of learning and .67 SD in study habits. These large differences are another reason why professional workers' children do so much better in school.

The mean difference in style of learning between professional and qualified workers' children amounted to .66 SD. The teachers expressed the opinion that professional workers' children were more engaged and critical in learning than qualified workers' children. The mean difference in study habits where the children gave reports on themselves, was small; it amounted to .28 SD. It should be underlined here that children at this stage are not yet sensitive and critical enough in evaluating their study habits.

Quite noticeable differences also appeared in the comparison of qualified and unqualified workers' children. The former excelled both in their style of learning and in study habits. The mean differences are .49 SD in style of learning and .42 SD in study habits. On this account, the children of qualified workers have more possibilities for obtaining a better knowledge than unqualified workers' children.

As to the personality characteristics examined, the largest differences between SES groups emerged in social behavior. According to the teachers, professional workers' children were more sociable, related better to their school-mates and participate more successfully in school life than unqualified workers' children. The mean difference between these two groups was as large as .82 SD. A socially more developed child has more opportunities to acquire new experiences and patterns of behavior which also contributes to his being successful in school.

Professional workers' children also proved to be more sociable than qualified workers' children. The mean difference was .42 SD. Professional workers' children are more active and on account of their greater sociability also more popular than qualified and unqualified workers' children. This is another factor that contributes to their better attainment in school.

Differences in sociability were also found between qualified and unqualified workers' children where again the former excelled. The mean difference amounted to .37 SD. Generally speaking, a family with lower SES will produce socially less successful children than will a socially and culturally more favourable familial environment. Therefore the school should make more effective efforts towards the socialisation of children, particularly those with a lower SES, helping them to assert themselves and play an active role within their class and within the school community.

We expected to find that children who were socially less developed would be more aggressive. The results of our research confirmed this expectation; there was a negative correlation between sociable and aggressive behavior ($r = -.39$). Professional workers' children generally showed less agressive behavior than unqualified workers' children. The mean difference between these two groups was .32 SD while in other comparisons of SES groups the differences were not significant. It has been stated in other research works that aggressive behavior is most common in unqualified workers' children, i.e. in those families where the material and cultural conditions are not favourable (Harnack, G.A., 1958; Moser, T., 1970). The authors point out that in such families the parents more often apply corporal punishment and other less acceptable measures which stimulates aggression in children; they gradually begin imitating their parents' behavior, accepting this model as their own pattern of behavior (Bronfenbrenner, U., 1958; Berkowitz, L., 1962). Here it should be noted that in other countries there are greater differences among SES groups concerning aggressive behavior than those found in out research project, which can be explained by the comparatively smaller SES differences among our families and in social life in general.

SES groups differed quite a lot in anxiety as well. Professional workers' children showed fewer anxiety symptoms than unqualified workers' children. The mean difference was .47 SD. A similar tendency emerged in the comparison of professional and qualified workers' children but the difference was smaller; it amounted to .24 SD. Qualified workers' children showed fewer anxiety symptoms than unqualified workers' children; the mean difference was small but still significant and anounted to .23 SD. As indicated by the results, the lower the children's SES, the more anxiety will be observed in them. Similar conclusions have been made by other authors (Dale, R. R., 1969; Dunn, J. A., 1968; Gartner-Harnach, V., 1972; Philips, B. N., Martin, R. P., Zorman, L., 1971).

The differences in anxiety between different SES groups can be explained considering that professional workers' children are more successful in school and therefore probably fell less anxiety in different situations in the classroom. The correlation between anxiety and academic achievement was negative and amounted to about -.34. Thus it is evident that anxiety is one of the factors that negatively affect children's academic achievement although it is not the major one. It is surprising, however, that it is quite frequently observed not only in unqualified workers' children (about 20%) but also in professional workers' children (about 10%).

Some studies have indicated that neurotic symptoms are somewhat more frequent in children from lower SES (Harnack, 1958; Eysenck, S. B. and Eysenck, H. J., 1969). Yet the results of these studies are not quite identical as the authors had different concepts about phenomena that were to be considered neurotic symptoms and also used different methods. In our research, neurotic symptoms of children were reported by their teachers by means of a specially designed rating scale. The results indicated that our children from different SES do not differ significantly in this respect. Generally speaking, these symptoms appear quite rarely in these children. The correlation between this variable and academic achievement was negative but low ($r = -.16$ to $-.19$). Other authors found similar negative correlations. Here it can be concluded that neurotic behavior cannot be considered an important negative factor of academic achievement except for individual cases where severe disturbances are observed.

DIFFERENCES BETWEEN EQUALLY INTELLIGENT CHILDREN WITH REGARD TO THE SOCIO-ECONOMIC STATUS OF THE FAMILY

The results of 4th grade pupils

In the previous chapter it was established that children from families with different socio-economic status (SES) differ in intelligence. It is well known that differences in academic achievement are mostly due to the intelligence factor which was also confirmed by the results of our research. Therefore we were particularly interested to find whether any differences in academic achievement and various personality characteristics would appear among children with equally developed intelligence and different SES.

In forming groups with equally developed intelligence we used the method of pairs. Each couple of children that formed a pair had received exactly the same scores on the non-verbal intelligence test and were of the same sex. The number of children involved in this research consequently decreased but the groups were still large enough to consider the results valid and reliable. In comparing the urban children, our hypothesis was based on the assumption that equally intelligent children would still differ significantly with regard to SES. We anticipated that children from families with higher SES would do better in school, have higher occupational and educational aspirations, better study habits and style of learning and would also differ in other personality characteristics from children whose families had a lower SES.

A comparison between equally intelligent urban and rural children was not carried out. In the course of data processing it became evident that urban and rural teachers use different criteria for evaluating their pupils' performance while for such a comparison it would be essential that children who are equally intelligent but differ with regard to SES, have the same teachers and are involved in the same type of educational process. These conditions were met only in the case of town children whom it was possible to classify into three SES groups of pupils attending the same classes. For this reason a comparison between urban and rural children was not carried out.

The results of Achievement tests

5.1.1.* The results presented in Table 9 indicate that professional workers' children received significantly higher scores in the reading test and achievement tests in individual school subjects than the children of unqualified workers. The mean differences between the two groups are the following: Reading achievement .66 SD, Slovene language .85 SD, Mathematics .78 SD, Social Studies .64 SD and Natural Sciences .84 SD. Even though the difference between professional and unqualified workers' children does decrease when comparing equally intelligent children, it still remains large. The hypothesis is confirmed entirely.

5.1.2. Differences in academic achievement emerged between professional and qualified workers' children as well. (See Table 10!) The former excelled significantly in achievement tests in individual school subjects. The mean differences between the two groups are: Slovene language .36 SD, Mathematics .38 SD, Social Studies .40 SD and Natural Sciences .30 SD. It is interesting, however, that the differences in the reading test are no longer significant. On the whole, the results confirm the hypothesis. If comparing equally intelligent children, the differences between the two groups are cut by half. They appear as relatively small but the influence of SES is still evident.

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*The ciphers correspond with the hypothesis numbers (see page 38).

5.1.3. A comparison between equally intelligent children of qualified and unqualified workers was carried out as well. Even when the intelligence factor was not considered, the differences between the two groups were not large; in two subjects they were moderate and in two subjects comparatively small. In this comparison, however, the differences are no longer significant (see Table 11) and the hypothesis is rejected. In other words, if comparing equally intelligent children from these two SES groups, their achievements are very much the same.

School marks

5.2.1. At the end of the school year, professional workers' children received significantly higher school marks than unqualified workers' children. The mean differences are the following: Slovene language .99 SD, Mathematics .91 SD, Social Studies .95 SD and Natural Sciences .94 SD. The hypothesis is confirmed entirely. In this case it is interesting that if the intelligence of children is equal, the differences in the school marks decrease only slightly.

5.2.2. Professional and qualified workers' children also differ significantly in school marks. At the end of the school year, the former had significantly higher marks than the latter. The mean differences are the following: Slovene language .61 SD, Mathematics .60 SD, Social Studies .64 SD and Natural Sciences .55 SD. In this comparison, the school mark differences decreased only slightly and remained quite pronounced. The hypothesis is confirmed entirely.

5.2.3. At the end of the school year, qualified workers' children received significantly higher marks than qualified workers' children. The mean differences are the following: Slovene language .41 SD, Mathematics .45 SD and

Natural Sciences .37 SD. The differences in Social Studies, however, are no longer significant. It is interesting that the results of the achievement tests when the intelligence of children is equal are no longer significant while the differences in school marks in three out of four subjects remain significant. The results in general confirm the hypothesis.

Occupational aspirations and expectations

5.3.1. The results indicate that professional workers' children have significantly higher occupational aspirations and expectations than unqualified workers' children. The mean difference in occupational aspirations is .44 SD and in occupational expectations .42 SD. In this comparison the differences decreased to a certain extent but they still remain quite pronounced. In other words, the differences between the two groups' occupational aspirations and expectations are significant even though the intelligence score is the same for both groups.

5.3.2. A comparison between the children of professional and qualified workers revealed that the former have significantly higher occupational aspirations than the latter. The mean difference is .38 SD. The difference is only small as it decreased somewhat in this comparison. The differences in occupational expectations are no longer significant and the hypothesis is not entirely confirmed.

5.3.3. Qualified and unqualified workers' children no longer differ significantly in occupational aspirations and expectations. Even when the intelligence score was not the same for the two groups, the differences were small while in this comparison they quite disappeared. The hypothesis is consequently rejected.

Educational aspirations

5.4.1. Professional workers' children also have higher educational aspirations than the children of unqualified workers. The mean difference is .60 SD. It is interesting that the difference between these two groups is practically the same as it was when the intelligence score was not considered. The results indicate that a child's educational aspirations are determined more by the socio-economic status of his family than by his intelligence. This is particularly true of these two groups of children who differ most with regard to SES.

5.4.2. In this comparison, the children of professional and qualified workers no longer differ significantly in educational aspirations. The hypothesis is rejected.

5.4.3. The differences between qualified and unqualified workers' children were small even when the intelligence score was not considered while in this comparison they quite disappeared. The hypothesis is rejected. It should of course be noted that these two groups are quite similar with regard to SES.

Study habits

5.5.1. Professional workers' children have significantly better study habits than unqualified workers' children. The mean difference is .66 SD. It is interesting that these differences did not decrease when comparing equally intelligent children which indicates that the forming of study habits is probably strongly related to the SES of the child's family. Our hypothesis is confirmed.

5.5.2. The differences between professional and qualified workers' children decreased in this comparison and are no longer significant. The hypothesis is consequently rejected.

5.5.3. The differences between qualified and unqualified workers' children also decreased in this comparison and are no longer significant. The hypothesis is again rejected.

Style of learning

5.6.1. Professional workers' children have a significantly better style of learning than the children of unqualified workers. The mean difference is .94 SD. The difference decreased somewhat in this comparison but it is still very large. This indicates that the style of learning is strongly related to the SES of the child's family. However, it should be considered that the children's style of learning was evaluated by their teachers. It is well known that in evaluating their pupils' personality characteristics, teachers are subject to "halo-effect", which practically means that they are likely to give high scores to pupils with high school marks and vice versa. The high correlation (r = .84) between the children's Grade point average and the scores they received for their style of learning also suggests this phenomenon. Even if it is taken into account, however, the difference in the style of learning between professional and qualified workers' children remains quite large. The hypothesis is confirmed.

5.6.2. The difference between professional and qualified workers also decreased in this comparison and is now moderate but still significant. The mean difference is .50 SD. The influence of "halo-effect" should be taken into account here as well. The hypothesis, however, is confirmed also in this case.

5.6.3. The difference between qualified and unqualified workers' children decreased in this comparison and is no longer significant. The hypothesis is consequently rejected. When equally intelligent children were compared, the differences decreased. It should also be considered, however, that these two groups are quite similar with regard to SES.

Social behavior

5.7.1. The differences in social behavior between professional and unqualified workers' children decreased in this comparison but they remained significant and quite large. Professional workers' children still excel in this respect; the mean difference is .63 SD. The hypothesis is confirmed. It can be concluded that a child's social behavior is related more strongly to the SES of his family than to his intelligence.

5.7.2. Professional workers' children excel over qualified workers' children in this comparison as well. The differences decreased a little but they remained significant. The mean difference is .34. The hypothesis is confirmed.

5.7.3. The differences between qualified and unqualified workers' children was small even in the original comparison while in this one they quite disappeared. The hypothesis is consequently rejected.

Aggressive behavior

5.8.1. In the original comparison professional workers' children showed slightly less aggressive behavior than unqualified workers' children but the differences were only slight. If the intelligence factor is the same for both groups, the differences are no longer significant. The hypothesis is consequently rejected.

5.8.2. The differences in aggressive behavior between professional and qualified workers' children were insignificant in the original comparison as well as in this one. The hypothesis is rejected.

5.8.3. The differences between qualified and unqualified workers' children proved to be insignificant in the original comparison as well as in this one. The hypothesis is rejected.

Restless behavior

5.9.1. The differences between professional and unqualified workers' children were insignificant both in the original comparison and in this one. The hypothesis is rejected.

5.9.2. The differences between professional and qualified workers' children were not significant either. The hypothesis is rejected.

5.9.3. The hypothesis is rejected again as there were no significant differences between qualified and unqualified workers' children in either comparison.

Anxiety symptoms

5.10.1. Professional workers' children displayed less anxiety than unqualified workers' children. In this comparison the differences decreased to a certain extent yet they remained significant. The mean difference amounts to .40 SD. As can be seen from the results, professional workers' children experience less anxiety than unqualified workers' children. This can be explained if we consider that unqualified workers' children are less successful in school and that the teachers blame them more than professional workers' children. The hypothesis is confirmed.

5.10.2. In the original comparison, the differences in anxiety between professional and qualified workers' children were small yet significant. In this comparison there are no significant differences. The hypothesis is rejected.

5.10.3. The picture is similar for qualified and unqualified workers' children. The differences between them were quite small in the original comparison while in this one they decreased and are no longer significant. The hypothesis is consequently rejected.

Neurotic symptoms

5.11.1. In the original comparison there were no significant differences between professional and unqualified workers' children regarding neurotic symptoms. Neither were there any such differences found in this comparison and the hypothesis is rejected.

5.11.2. Neither were there any significant differences between professional and qualified workers' children in either comparison. The hypothesis is rejected.

5.11.3. Similar were the findings concerning qualified and unqualified workers' children. No significant differences between them were found in either comparison. The hypothesis is rejected.

DISCUSSION OF RESULTS

The results indicate that equally intelligent children from different SES achieve different levels of success in school. The greatest differences emerged between professional workers' children and unqualified workers' children, i.e. between the two groups that are the farthest apart with regard to SES. Professional workers' children displayed a better knowledge of the basic school subjects and also read better than the children of unqualified workers. In a comparison of equally intelligent children from these two SES groups, the differences decreased to a certain extent but they still remained quite large. Thus, the children of unqualified workers, even though equally intelligent, are academically less successful than the children of more educated parents. This indicates that differences in academic achievement are largely determined by the SES of the child's family. Intelligence alone cannot abolish these differences between groups that are far apart with regard to SES. Our results indicate that they can be compensated to a smaller extent only.

It is surprising that even greater differences emerged in school marks. Here it can be concluded that teachers are rather influenced by the SES of the children's families when evaluating their pupils' knowledge. Town teachers discriminate between the two marginal groups far too much. This can be explained if we realize that teachers consider not only a pupil's knowledge but also his diligence, study habits, style of learning and manners. Some teachers are more sensitive to such characteristics, others less. Many teachers probably do not even realize how much their general relation with each pupil affects the school marks they give out. Thus children with better study habits and a more suitable behavior receive slightly higher marks than children who behave in a less acceptable manner. Generally speaking, professional workers' children are slightly better off in this respect than unqualified workers' children and therefore the teachers give the latter slightly lower marks.

Professional workers' children also displayed quantitatively and qualitatively better knowledge than qualified workers' children. If differences in academic achievement were determined solely by intelligence, then in this comparison the two groups of children would have had more or less the same scores in achievement tests. The differences, however, were cut by half. It is obvious that differences in academic achievement are still very much determined by the SES of the children's parents.

Again, the surprising tendency appeared that the differences in school marks were greater than those in achievement test results. This discrepancy has an origin similar to that described earlier. Thus, an unfair unfounded academic discrimination takes place in evaluating the performaces of these two groups of children.

We are left with the comparison of qualified and unqualified workers' children. When the intelligence of children was equal, these two groups obtained more or less equal scores in achievement tests. Here it can be concluded that intelligence can compensate for the differences in academic achievement in children belonging to closely related SES groups.

The school marks, however, do not confirm this assumption. Children of qualified workers had higher marks in the basic subjects than unqualified workers' children. As stated before, there were no significant differences between these two groups in the results of the achievement tests. This indicates again that SES differences are more pronounced in the teachers' evaluation of the pupils' knowledge than in the pupils' knowledge itself.

Significant differences between professional workers' children and unqualified workers' children were also found in motivation variables. The former displayed considerably higher occupational aspirations and expectations than the latter even though the children were equally intelligent. The same tendency emerged in the case of educational aspirations where the differences were greater still. The differences in occupational and educational aspirations diminished a little but the effect of SES was still obvious. More educated parents encourage their children towards more demanding goals concerning education and occupation and they help them to cope with problems in school and elsewhere. Therefore it is understandable that professional workers' children have higher occupational and educational aspirations and do better in school than their age-mates from families of unqualified workers.

A comparison of professional and qualified workers' children revealed that the former have higher occupational aspirations while the two groups do not differ significantly in occupational expectations and educational aspirations. This indicates that qualified workers' children are in their occupational and educational aspirations quite close to professional workers' children. They are,however, less successful in school and therefore probably not all of them will be able to fulfil their ambitions.

In the original comparison there were small yet significant differences between qualified and unqualified workers' children concerning occupational and educational aspirations. In this comparison they quite disappeared which indicates that differences in educational and occupational aspirations can be ironed out if comparing equally intelligent children from closely related SES groups.

The results also indicated that SES has a considerable effect on forming the children's style of learning and study habits. In this case, professional workers' children by far excel over their equally intelligent age-mates from families of unqualified workers. Even though the children from the two groups were equally intelligent, the differences in their style of learning and study habits did not decrease much. Our assumption is that more educated parents can give their children more adequate advice and also help them in learning. Gradually, children develop a more effective style of learning and better study habits. Less educated parents usually cannot provide such help even if they want to.

In the original comparison there were small differences in study habits between children of professional and qualified workers. In this comparison, the differences diminished and were no longer significant. In their style of learning, however, the former still excelled significantly over the latter. These differences are explained in the same way as before. It should be added, however, that qualified workers can give their children better help in learning than unqualified workers.

The differences in the study habits and style of learning between qualified and unqualified workers' children diminished in this comparison and are no longer significant. Besides, these children are quite closely related with regard to SES.

Differences between SES groups of equally intelligent children are also evident in sociability. Professional workers' children are more loyal, they have better relationships with their mates and are socially more successful than unqualified workers' children. In this comparison the differences decreased to a certain extent but they were still quite large. Professional workers' children also excel over qualified workers' children in this respect.

These results indicate that a child's social behavior depends a lot on his parents' SES. More educated parents teach their children more constructive and socially more acceptable ways of behaving than less educated parents. Also important for the children's socialization are the relationships within the family as the child at this stage of development usually copies his parents' conduct, and accepts their viewpoints.

As to other personality characteristics, significant differences were observed only in the case of anxiety in the groups that are farthest apart with regard to SES. Unqualified workers' children showed more anxiety than professional workers' children. It is very probable that unqualified workers' children are more anxious because of their poorer academic achievement in school.

There were no significant differences between different SES groups concerning aggression, restlessness and neurotic symptoms. It should be noted, though, that no differences in this respect were found in the original comparison except for aggression in the comparison of professional and unqualified workers' children.

The results indicate that children from different SES groups, even though equally intelligent, achieve essentially different levels of success in school. This means that the academic achievement of unqualified and qualified workers' children is poorer because they live in a less favourable familial environment. As can be seen from the results obtained, the level of social and cultural development causes considerable differences among children concerning motivation factors, style of learning, study habits and sociability. These factors play an equally important role in academic achievement as does intelligence. The larger the differences with regard to SES, the more children differ in the above-mentioned cognitive, motivation and other personality characteristics. This conclusion is based on the mean results of SES groups and is valid only in general. This does not mean that all the children of qualified and unqualified workers are less successful in school, less motivated, have a less efficent style of learning and study habits and are not as socialised as professional workers' children. It must be taken into account that there are considerable individual differences among children in each SES group. Some children of unqualified workers do as well in school or even better than some children of professional workers. Yet very few children of unqualified workers are very successful in school while there are many more professional workers' children who are academically successful.

TABLE 9: The results of equally intelligent children of professional and unqualified workers in achievement tests, school marks, occupational and educational aspirations, study habits and personality characteristics

	M_1	SD_1	M_3	SD_3	t-test	p
Achievement tests:						
Reading achievement	65.52	19.02	52.86	17.05	4.15	.001
Slovene language	116.52	11.56	105.21	12.50	5.56	.001
Mathematics	25.27	6.14	20.35	5.50	4.94	.001
Social studies	37.74	6.40	33.16	7.23	3.95	.001
Natural sciences	45.89	7.86	38.28	8.37	5.55	.001
School marks:						
Slovene language	4.10	.88	3.09	.88	6.62	.001
Mathematics	4.01	.95	3.00	1.03	5.93	.001
Social studies	4.27	.94	3.18	1.07	6.27	.001
Natural sciences	4.30	.87	3.32	.99	6.12	.001
Grade point average	4.17	.83	3.15	.90	6.84	.001
Occupational aspirations*	2.49	1.19	3.07	1.35	2.71	.01
Occupational expectations*	2.66	1.35	3.23	1.29	2.54	.01
Educational aspirations*	1.98	1.22	2.78	1.33	3.09	.01
Study habits	59.68	9.04	53.61	8.54	4.03	.001
Style of learning	19.79	3.61	15.77	3.95	6.20	.001
Sociability	21.40	2.71	19.57	2.84	3.84	.001
Aggression**	13.39	1.99	13.10	1.88	.85	n.s.
Restlessness**	19.58	3.82	19.46	3.56	.20	n.s.
Anxiety**	18.00	3.78	16.51	3.47	2.39	.05
Neurotic symptoms**	23.33	2.38	23.32	2.17	.04	n.s.

M_1 = the mean of the results of professional workers' children

SD_1 = standard deviation of the results of professional workers' children

M_3 = the mean of the results of unqualified workers' children

SD_3 = standard deviation of the results of unqualified workers' children

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*A lower numeral value stands for higher aspirations

**A higher results stands for less frequent manifestations of the characteristic

TABLE 10: The results of equally intelligent children of professional and qualified workers in achievement tests, school marks, occupational and educational aspirations, study habits and personality characteristics

	M_1	SD_1	M_2	SD_2	t-test	p
Achievement tests:						
Reading achievement	67.19	18.46	62.32	20.65	1.61	n.s.
Slovene language	117.14	9.90	112.89	13.21	2.35	.05
Mathematics	26.61	6.16	24.29	5.88	2.48	.01
Social studies	38.98	6.41	36.30	6.88	2.59	.01
Natural sciences	46.06	7.74	43.45	8.93	2.03	.05
School marks:						
Slovene language	4.29	.77	3.72	.97	4.17	.001
Mathematics	4.18	.84	3.64	.96	3.80	.001
Social studies	4.41	.83	3.79	1.00	4.25	.001
Natural sciences	4.38	.78	3.89	.94	3.60	.001
Grade point average	4.31	.72	3.76	.88	4.36	.001
Occupational aspirations*	2.27	1.17	2.94	1.38	3.37	.001
Occupational expectations*	2.64	1.40	3.02	1.43	1.74	n.s.
Educational aspirations*	1.90	1.25	2.26	1.26	1.58	n.s.
Study habits	59.24	9.50	57.61	9.21	1.10	n.s.
Style of learning	20.27	3.70	18.23	4.27	3.30	.001
Sociability	21.44	2.65	20.37	3.50	2.22	.05
Aggression**	13.43	1.90	13.28	1.71	.51	n.s.
Restlessness**	19.36	3.68	19.46	3.30	.18	n.s.
Anxiety**	18.46	3.48	17.52	3.62	1.69	n.s.
Neurotic symptoms**	23.42	2.11	23.17	2.66	.67	n.s.

M_1 = the mean of the results of professional workers' children

SD_1 = standard deviation of the results of professional workers' children

M_2 = the mean of the results of qualified workers' children

SD_2 = standard deviation of the results of qualified workers' children

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*A lower numeral value stands for higher aspirations

**A higher result stands for less frequent manifestations of the characteristic

TABLE 11: The results of equally intelligent children of qualified and unqualified workers in achievement tests, school marks, occupational and educational aspirations, study habits and personality characteristics

	M_2	SD_2	M_3	SD_3	t-test	p
Achievement tests:						
Reading achievement	51.17	16.83	51.37	17.59	.08	n.s.
Slovene language	105.67	14.04	103.94	12.74	.84	n.s.
Mathematics	21.19	6.41	19.88	6.03	1.36	n.s.
Social studies	32.20	8.30	32.31	7.79	.09	n.s.
Natural sciences	38.55	8.63	38.01	8.23	.41	n.s.
School marks:						
Slovene language	3.51	.95	3.12	.90	2.68	.01
Mathematics	3.33	1.07	2.88	.89	2.92	.01
Social studies	3.48	1.03	3.20	.98	1.78	n.s.
Natural sciences	3.60	1.03	3.23	.92	2.39	.05
Grade point average	3.48	.92	3.11	.81	2.73	.01
Occupational aspirations*	2.95	1.28	3.19	1.34	1.17	n.s.
Occupational expectations*	3.18	1.22	3.45	1.36	1.39	n.s.
Educational aspirations*	2.27	1.25	2.73	1.32	1.94	n.s.
Study habits	55.87	9.44	53.76	8.96	1.47	n.s.
Style of learning	16.44	4.18	15.55	4.11	1.37	n.s.
Sociability	19.64	3.02	19.13	2.87	1.11	n.s.
Aggression**	13.30	1.72	13.31	1.81	.03	n.s.
Restlessness**	19.10	3.49	19.82	3.50	1.32	n.s.
Anxiety**	17.01	3.79	16.30	3.61	1.23	n.s.
Neurotic symptoms**	23.07	2.29	23.36	1.86	.89	n.s.

M_2 = the mean of the results of qualified workers' children

SD_2 = standard deviation of the results of qualified workers' children

M_3 = the mean of the results of unqualified workers' children

SD_3 = standard deviation of the results of unqualified workers' children

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*A lower numeral value stands for higher aspirations

**A higher result stands for less frequent manifestations of the characteristic

DIFFERENCES BETWEEN BOYS AND GIRLS

The results of 4th grade pupils

We were also interested to find out whether there were any significant differences between boys and girls in academic achievement and some personality characteristics. Our hypothesis was based on the assumption that boys and girls do not differ significantly in academic achievement, intellectual abilities, style of learning, study habits and other personality characteristics. The hypothesis was tested on urban children.

Reading achievement

6.1.* Boys and girls obtained the following scores in the Reading achievement test:

Groups	M	SD	F-test	p
Boys	59.55	22.44	.78	n.s.
Girls	57.97	19.32		

The hypothesis is confirmed. Boys and girls did not differ significantly in reading achievement scores. Yet variability was greater in boys than in girls; the former received some very high and also some very low scores.

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*The ciphers correspond with the hypothesis number (see page 41).

Slovene language

6.1. The following scores were obtained by boys and girls in the Slovene language achievement test:

Groups	M	SD	F-test	p
Boys	109.70	14.48	2.39	n.s.
Girls	111.63	14.25		

The hypothesis is confirmed. Boys and girls did not differ significantly in their knowledge of the Slovene language.

6.2. The teacher-assigned marks in the subject provided the following picture:

Groups	M	SD	F-test	p
Boys	3.56	1.02	17.55	.001
Girls	3.92	1.00		

The hypothesis is rejected. The girls received significantly higher marks in Slovene than did boys even though the objective test indicated no significant differences between them. The teachers obviously evaluated the girls' performance more favourably.

Mathematics

6.1. The Mathematics achievement test produced the following results:

Groups	M	SD	F-test	p
Boys	23.79	7.26	5.06	.05
Girls	22.49	6.76		

The hypothesis is rejected. The boys received somewhat higher average scores in this test. However, the differences are from the educational point of view very small.

6.2. The teachers gave their pupils the following marks in this subject:

Groups	M	SD	F-test	p
Boys	3.61	1.12	.73	n.s.
Girls	3.54	1.11		

The hypothesis is confirmed; the differences between boys' and girls' school marks are not significant. Since the Mathematics achievement test indicated that boys have a little better knowledge of this subject it is obvious again that the teachers gave the girls more favourable marks.

Social Studies

6.1. The mean scores of the Social Studies achievement test were the following:

Groups	M	SD	F-test	p
Boys	36.45	7.87	11.25	.001
Girls	34.17	8.11		

The hypothesis is not confirmed. The boys obtained significantly higher scores in this test than did the girls.

6.2. The school marks in this subject were the following:

Groups	M	SD	F-test	p
Boys	3.72	1.10	1.44	n.s.
Girls	3.83	1.03		

The teachers' marks were in accordance with the hypothesis; boys and girls did not differ in the marks received in the subject. The objective test, however, indicated significant differences between them, i.e. the boys displayed a better knowledge than did the girls.

Natural Sciences

6.1. Boys and girls obtained the following mean scores in the Natural Sciences achievement test:

Groups	M	SD	F-test	p
Boys	43.45	9.86	8.59	.01
Girls	41.10	9.08		

The hypothesis is rejected. The boys obtained significantly higher scores in this subject than did the girls.

6.2. The mean school marks in the subject were the following:

Groups	M	SD	F-test	p
Boys	3.87	.97	.09	n.s.
Girls	3.90	1.03		

The hypothesis is confirmed as the differences found are not statistically significant. The Natural Sciences achievement test indicated, however, that the boys excelled significantly; this discrepancy was again due to the fact that the teachers gave girls more favourable marks in the subject.

Grade point average

6.2. The next table presents the Grade point average in the basic school subjects:

Groups	M	SD	F-test	p
Boys	3.69	.97	1.68	n.s.
Girls	3.80	.97		

The hypothesis is confirmed. The boys and girls did not differ significantly in this respect.

Intellectual abilities

6.3. A non-verbal intelligence test gave the following mean scores:

Groups	M	SD	F-test	p
Boys	45.98	12.27	.40	n.s.
Girls	45.23	12.61		

The hypothesis is confirmed. No significant differences concerning intellectual abilities were found between the boys and girls. Significant, however, was the interaction between SES and sex. It indicated that among qualified workers' children the boys excelled while among unqualified workers' children the girls excelled. Among professional workers' children there were no significant differences with regard to sex.

Occupational aspirations and expectations

Occupational aspirations were determined by means of a six--point rating scale in which lower numeral values stand for higher aspirations.

6.4. Occupational aspirations were as follows:

Groups	M	SD	F-test	p
Boys	2.72	1.44	5.53	.05
Girls	2.99	1.18		

The hypothesis is not confirmed as the boys displayed a little higher aspirations. Here it is interesting that greater variability was found among the boys. More boys than girls aspired to more demanding occupations.

6.4. Occupational expectations produced a similar picture. Here again, lower numeral values stand for higher expectations.

Groups	M	SD	F-test	p
Boys	2.93	1.50	4.15	.05
Girls	3.17	1.20		

Occupational expectations were a little higher in the boys; the hypothesis is consequently rejected. Variability was again greater in the boys than in the girls. A larger number of boys believed that they would achieve very demanding occupations.

Educational aspirations

6.5. Educational aspirations were determined by means of a five-point rating scale (1 = university, 5 = elementary school). The mean scores were as follows:

Groups	M	SD	F-test	p
Boys	2.33	1.31	1.40	n.s.
Girls	2.14	1.23		

The hypothesis is confirmed. The children did not differ significantly in their educational aspirations.

Study habits

6.6. The following mean results were obtained for study habits:

Groups	M	SD	F-test	p
Boys	55.07	9.70	16.83	.001
Girls	58.41	8.52		

The hypothesis is not confirmed. The girls proved to have slightly better study habits than the boys. Variability was again greater among the boys.

Style of learning

6.7. The teachers gave the following evaluation of their pupils' style of learning:

Groups	M	SD	F-test	p
Boys	18.33	4.34	3.18	n.s.
Girls	17.71	4.61		

The hypothesis is confirmed. The boys and girls did not differ significantly in this respect.

Social behabior

6.8. The teachers gave the following evaluation of their pupils' sociability:

Groups	M	SD	F-test	p
Boys	20.08	3.18	3.01	n.s.
Girls	20.60	3.15		

The hypothesis is confirmed. The boys and girls did not differ significantly in this respect.

Aggressive behavior

6.9. The teachers gave the following evaluation of their pupils' aggressive behavior:

Groups	M	SD	F-test	p
Boys	12.62	1.83	91.99	.001
Girls	14.05	1.46		

The hypothesis is not confirmed. (A higher result indicates a lower level of aggression.) The boys proved to be in general more aggressive than the girls. Variability was again greater in the boys than in the girls. This means than a larger number of boys behave aggressively in school.

Restless behavior

6.10. The teachers gave the following evaluation of their pupils' restlessness:

Groups	M	SD	F-test	p
Boys	18.10	3.47	92.63	.001
Girls	20.97	3.06		

The hypothesis is rejected. (A higher result stands for less frequent restless behavior.) The boys were generally more restless in school than were the girls.

Anxiety symptoms

6.11. In this respect, the boys and girls were evaluated as follows:

Groups	M	SD	F-test	p
Boys	17.96	3.45	13.15	.001
Girls	16.82	3.80		

The hypothesis is rejected. (A higher result stands for a lower level of anxiety.) The boys were in general less worried and anxious than the girls.

Neurotic symptoms

6.12. The teachers gave the following evaluation of their pupils' neurotic symptoms:

Groups	M	SD	F-test	p
Boys	23.06	2.45	1.94	n.s.
Girls	23.48	2.00		

The hypothesis is confirmed. (A higher result stands for less frequent manifestations of these symptoms.) The boys and girls did not differ significantly in this respect. Variability was again greater in the boys. Some boys showed more and some boys fewer neurotic symptoms than did the girls.

DISCUSSION OF RESULTS

Our hypotheses were based on the assumption that boys and girls would not differ significantly in academic achievement. The results obtained did not confirm the hypotheses entirely. The two groups did more or less equally well in reading; they had more or less the same vocabulary and were equally successful in comprehending texts. They did not differ in the reading speed, either. American authors who examined reading achievement in large samples of pupils most often found no differences between boys and girls in their first years of schooling (Maccoby and Jacklin, 1974, p. 351). Differences between the sexes emerged later, usually in adolescence.

The Slovene language achievement test produced no significant differences between the two groups; these were found, however, in the results of achievement tests on the other basic subjects. The boys did slightly better than the girls. The mean difference in Mathematics was .18 SD, in Social Studies .28 SD and in Natural Sciences .24 SD. From the educational point of view, these differences can be considered very small; they practically do not affect children's academic achievement. It is possible that these differences were brought about by lesser anxiety and greater self-confidence displayed by the boys in the testing situation.

The school marks, however, produced a different picture. The greatest difference between the two groups emerged in Slovene language. The girls had rather better mean marks in this subject; the mean difference was .36 SD. No significant differences were found in the remaining three basic subjects. It was established earlier that the results of achievement tests in these subjects indicated that boys had slightly better knowledge of Mathematics, Social Studies and Natural Sciences. Girls obviously receive higher average marks for their performance than do boys. It is well known that teachers evaluate not only pupils' knowledge but also their behavior. Our results indicate that boys are more aggressive and restless in school. This is probably one of the reasons why they receive slightly lower marks.

At the same time it became evident that teachers differentiate boys' and girls' restlessness and aggression. This can be concluded from the correlations calculated separately for the boys and girls. In the case of the boys, a negative correlation (r = -.35) was found between Grade point average and aggression, and another negative one (r = -.27) between Grade point average and restlessness while in the case of the girls there was no such correlation (r = .00). This means that more aggressive and restless boys have in general somewhat lower marks and vice versa which is not the case with girls. Because of these characteristics they cannot, as a rule, obtain either lower or higher marks. Therefore boys have slightly lower marks than girls.

No differences between the sexes were found in intellectual abilities which is not surprising if one considers that other authors usually found no such differences between boys and girls in their first years of schooling. It should be underlined, however, that the results depend much on the type of test used. When differences were found, the results indicated that girls scored higher in verbal tests while boys excelled in non-verbal ones. We used a non-verbal test that covered classification and analogies of pictorial symbols and number seriations. These tests are rather strongly saturated with "g" factor. Thus, the test covers mainly general intelligence and it is therefore understandable why no differences between boys and girls were found.

The boys displayed somewhat higher occupational aspirations and expectations than girls. The mean differences are wery small, however, amounting to .21 SD in occupational aspirations and .18 SD in occupational expectations. Besides, the boys displayed slightly greater variability. More boys than girls wish to achieve very demanding occupations. However, at this stage the children do not yet have a realistic picture about the demands of different occupations and therefore these results should not be generalized. The latter conclusion is supported by the educational aspiration scores in which no significant differences between the sexes were found.

In the style of learning, evaluated by teachers, no significant differences between the sexes were found. Boys and girls displayed a more or less equally effective cognitive approach to learning and also proved to be equally critical. On the other hand, when the children reported on their study habits the picture was somewhat different. It became evident that girls have better study habits than boys, the mean difference being .36 SD. Apart from that, variability was greater in the boys. Because of the lower mean scores and greater variability there are more pupils with inadequate study habits among boys. Here it could be concluded that girls study more regularly and are more diligent and disciplined in studying both at home and in school. Probably this is also the reason why they have somewhat higher marks on average than boys.

There were no differences between the sexes concerning sociability. Boys and girls are at this stage equally successful in this respect and co-operate equally well with their age-mates. Both sexes display an interest for social activities and take part in them. Other authors also reported similar findings. Maccoby and Jacklin (1974, p. 394) conclude from several studies that the sexes display equal reactiveness to social stimuli and are equally successful in social learning. Boys like to mix with larger groups while girls prefer small ones and are slightly more inclined towards adult company. Generally speaking, however, in the social aspects there are no differences, or else rather small ones, between boys and girls.

Large differences between the sexes appeared in aggression. Boys display more aggressive behavior than girls. The mean difference is .79 SD. This difference is not surprising. As a rule, other authors also report a more frequent physical and verbal aggression in boys. Many of them explain these differences with the assumption that parents tolerate agressive behavior in boys more than in girls.

Boys are also more restless in school than are girls. The mean difference is .81 SD. During lessons, boys are more restless, less obedient, they get excited quickly and disturb the lessons more than girls. Generally speaking, restless behavior in school is relatively rare but more so in girls than in boys.

There were no differences between the sexes in neurotic symptoms. They occur equally rarely in boys and in girls. There were, however, differences concerning anxiety. The mean difference amounts to .31 SD. Girls are more shy, worried and anxious than boys. These differences between the sexes are small. Other authors also found that girls are more anxious (Sarason et al., 1960). It is questionable, however, whether the differences between the sexes are "really" such as presented by the results or whether the boys are only more defensive and not so ready to admit they are afraid.

REPORT ON CORRELATIONS

The results of 4th grade pupils

The variables in our research were divided into predictor and criterion variables. This chapter presents criterion--criterion, predictor-predictor and predictor-criterion relationships.

CRITERION-CRITERION RELATIONSHIPS

Hypothesis 1: There will be positive relationships between Achievement tests in various school subjects.

TABLE 12: Correlations between Achievement tests (urban children)

	Reading test	Slov. lang.	Math.	Social. Stud.
Slov. lang.	.71			
Math.	.61	.72		
Soc. Stud.	.70	.69	.66	
Nat. Sc.	.69	.66	.65	.73

The urban children's results confirm the hypothesis. All the correlations between Achievement test results were positive and relatively high; they ranged between .65 (Mathematics and Natural Sciences) and .73 (Social Studies and Natural Sciences).

Correlations between reading achievement and the results of Achievement tests were also high; they ranged between .61 (reading achievement test and Mathematics achievement test) and .71 (reading achievement test and Slovene language achievement test).

TABLE 13: Correlations between Achievement tests (rural children)

	Reading test	Slov. lang.	Math.	Social Stud.
Slov. lang.	.69			
Math.	.54	.63		
Soc. Stud.	.57	.62	.58	
Nat. Sc.	.60	.63	.62	.71

The rural children's results also confirm the hypothesis. All the correlations between the results of Achievement test on school subjects were positive and significant, ranging between .58 (Mathematics and Social Studies) and .71 (Social Studies and Natural Sciences). Correlations between the results of Achievement tests and the reading achievement test were also positive and quite pronounced, ranging between .54 (reading achievement and Mathematics) and .69 (reading achievement and Slovene language).

As we can see, urban children's Achievement test results correlated in a very similar way as did those of rural children. The lowest correlations were found between Mathematics and Social Studies (also Natural Sciences) while the highest were between Social Studies and Natural Sciences. Here it is interesting that in both cases the reading achievement correlated lowest with Mathematics and highest with Slovene language achievement.

Hypothesis 2: There will be positive relationships between school marks in various school subjects.

TABLE 14: Correlations between school marks in **basic** subjects (urban children)

	Slov. lang.	Math.	Social Stud.	Nat. Sc.
Math.	.79			
Social Stud.	.82	.81		
Nat. Sc.	.80	.76	.84	
G.p.a.	.92	.91	.94	.91

The urban children's results confirm the hypothesis; all the correlations were positive and significant, ranging between .76 (Mathematics and Social Studies) and .84 (Social Studies and Natural Sciences). Correlations between marks in individual subjects and Grade point average were higher still; they ranged between .91 and .94.

TABLE 15: Correlations between school marks in **basic** subjects (rural children)

	Slov. lang.	Math.	Social Stud.	Nat. Sc.
Math.	.71			
Social Stud.	.74	.69		
Nat. Sc.	.73	.68	.82	
G.p.a.	.89	.78	.91	.90

The rural children's results also confirm the hypothesis. All the correlations between school marks in the subjects mentioned were positive and significant, ranging between .68 (Mathematics and Natural Sciences) and .82 (Social Studies and Natural Sciences). Correlations between marks in different subjects and the Grade point average were higher still, ranging between .78 and .91.

In conclusion it can be stated that the correlations between the marks in the school subjects were very high both in urban and rural children. In both cases the correlation was lowest between the marks in Mathematics and Natural Sciences and the highest between the marks in Social Studies and Natural Sciences.

Hypothesis 3: There will be positive relationships between the results of Achievement tests and the marks in the same subjects.

TABLE 16: Correlations between Achievement tests and school marks in the same subjects (urban children).

School subjects	Achievement tests and school marks	Achievement tests and G.p.a.	Reading test and school marks
Slov. lang.	.68	.69	.63
Math.	.66	.62	.59
Soc. Stud.	.59	.62	.59
Nat. Sc.	.57	.62	.56

The urban children's results confirm the hypothesis. All the correlations between the results of Achievement tests and school marks in the same subjects were positive and comparatively high, ranging between .57 (Natural Sciences) and .68 (Slovene language).

The correlations between the results of difference Achievement tests and the Grade point average were also quite high, ranging between .62 (Mathematics, Social Studies, Natural Sciences) and .69 (Slovene language).

Table 16 at the same time presents the correlations between reading achievement and the school marks received in various school subjects; these correlations were also positive and quite high, ranging between .56 (Natural Sciences) and .63 (Slovene language).

TABLE 17: Correlations between Achievement tests and school marks in the same subjects (rural children)

School subjects	Achievement tests and school marks	Achievement tests and G.p.a.	Reading test and school marks
Slov. lang.	.49	.58	.59
Math.	.56	.52	.48
Soc. Stud.	.53	.49	.57
Nat. Sc.	.51	.45	.58

The rural children's results also confirm the hypothesis (see Table 17). All the correlations between Achievement test results and school marks in the same subjects are positive and quite high, ranging between .49 (Slovene language) and .56 (Mathematics).

The correlations between the results of individual Achievement tests and the Grade point average are also quite high, ranging between .45 (Natural Sciences) and .58 (Slovene language).

The correlations between school mark in individual subjects and reading achievement test were also positive and quite high, ranging between .48 (Mathematics) and .59 (Slovene language).

The hypothesis is entirely confirmed. It should be stressed, however, that the correlations between Achievement tests and school marks in the same subjects were higher in the urban than in rural children which means that the urban children are marked more objectively than their rural age-mates.

The results also indicate that the children's school marks correlate quite highly with their reading achievement. Pupils with a larger vocabulary and better comprehension of the text generally receive higher marks in various school subjects, and vice versa.

PREDICTOR-PREDICTOR RELATIONSHIPS

Hypothesis 4: There will be positive relationships between occupational aspirations, occupational expectations and educational aspirations.

TABLE 18: Correlations between occupational aspirations, occupational expectations and educational aspirations (urban children)

	Occupational aspirations	Occupational expectations
Occupational expectations	.72	
Educational aspirations	.42	.44

The urban children's results confirm the hypothesis. The correlation between occupational aspirations and occupational expectations was positive and high (.72) while the correlation of these two variables with educational aspirations was lower but still quite high (.42 and .44).

TABLE 19: Correlations between occupational aspirations, occupational expectations and educational aspirations (rural children)

	Occupational aspirations	Occupational expectations
Occupational expectations	.71	
Educational aspirations	.37	.50

The rural children's results confirm the hypothesis. Here again, the correlation between occupational aspirations and occupational expectations were positive and high (.71) while the correlation of these two variables with educations aspirations was considerably lower (.37 and .50).

The hypothesis is entirely confirmed. In both cases there was a high correlation between occupational aspirations and occupational expectations; the majority of pupils obviously expect to be able to fulfil their aspirations. It is interesting that the correlation between occupational and educational aspirations was considerably lower which indicates that many pupils at this stage are not yet thoroughly acquainted with the demands of various occupations.

Hypothesis 5: There will be negative relationships between the children's social, aggressive and restless behavior, anxiety and neurotic symptoms.

TABLE 20: Correlations between sociability and other characteristics (urban children)

	Aggressive behavior	Restless behavior	Anxiety symptoms	Neurotic symptoms
Sociability	.39	.29	.32	.30

Note: Remember that these variables are reversed. Thus, any correlation involving these variables, if positive are actually negative correlations and, if negative, are actually positive correlations.

The hypothesis is entirely cinfirmed. All the correlations between social behavior and the characteristics examined were negative and significant. The highest negative correlation was found between social and aggressive behavior (-.39) while the correlations between social behavior and restless behavior, anxiety and neurotic symptoms were approximately the same.

TABLE 21: Correlations between social behavior and other characteristics (rural children)

	Aggressive behavior	Restless behavior	Anxiety symptoms	Neurotic symptoms
Sociability	.33	.25	.36	.17

Note: Remember that the variables aggressive, restless behavior, anxiety and neurotic symptoms are reversed. Thus, any correlations of these variables with social behavior, if positive are actually negative correlations.

The hypothesis is confirmed. All the correlations between social behavior and the mentioned variables are negative and significant. The highest negative correlation was found between social behavior and anxiety symptoms (-.26) and the lowest between social behavior and neurotic symptoms (-.17).

The urban and rural children's results indicate that social behavior correlates negatively with the variables mentioned but the correlation is only slight. Generally speaking, more sociable pupils are less aggressive, restless and anxious and also display fewer neurotic symptoms.

Hypothesis 6: There will be a negative relationship between anxiety symptoms and aggressive and restless behavior.

TABLE 22: Correlations between aggressive and restless behabior, anxiety and neurotic symptoms (urban children)

	Aggressive behavior	Restless behavior	Anxiety symptoms
Restless behavior	.70		
Anxiety symptoms	-.13	-.15	
Neurotic symptoms	.29	.33	.28

The hypothesis is confirmed. The correlation between anxiety symptoms and aggressive behavior was -.13, and between anxiety symptoms and restless behavior -.15.

TABLE 23: Correlations between aggressive and restless behavior, anxiety and neurotic symptoms (rural children)

	Aggressive behavior	Restless behavior	Anxiety symptoms
Restless behavior	.72		
Anxiety symptoms	-.18	-.16	
Neurotic symptoms	.25	.29	.23

The hypothesis is confirmed for rural children as well (see Table 23). The correlation between anxiety symptoms and aggressive behavior was -.18 and between anxiety symptoms and restless behavior -.16. Both correlations are negative and significant.

These results indicate that more anxious pupils are less aggressive and quieter. The correlation, however, is only slight.

Hypothesis 7: There will be positive relationships between neurotic symptoms, aggressive and restless behavior and anxiety symptoms.

The hypothesis is confirmed both for urban and rural children (see Tables 22 and 23). The correlations ranged between .28 and .33 for the urban children and between .23 and .29 for the rural children.

These results indicate that neurotic children are either slightly more aggressive and restless or slightly more anxious. The correlations, however, are weak.

Hypothesis 8: There will be positive relationships between restless and aggressive behavior.

The correlation between restless and aggressive behavior was .70 for the urban children and .72 for the rural children. The hypothesis is confirmed in both cases; restless children proved to be more aggressive, and vice versa.

There was a positive and strong correlation between these two variables. It is our opinion, however, that the teachers did not distinguish very well between the two variables, attributing aggression to restless children and vice versa. If not for this effect, the correlation would probably not have been so high.

Hypothesis 9: There will be a positive relationship between intellectual abilities and style of learning.

TABLE 24: Correlations between intellectual abilities, style of learning, occupational and educational aspirations and study habits (urban children)

	Intellectual abilities	Style of learning	Study habits
Style of learning	.50		
Occupational aspirations	-.23	-.31	-.23
Occupational expectations	-.16	-.33	-.30
Educational aspirations	-.22	-.34	-.39
Study habits	.26	.43	

Note: The variables occupational aspirations, occupational expectations and educational aspirations are reversed. Thus, any correlations involving these variables, if negative, are actually positive correlations, and vice versa.

The correlations between intellectual abilities and style of learning (the latter was evaluated by teachers) were positive and significant and amounted to .50. The hypothesis is confirmed.

TABLE 25: Correlations between intellectual abilities, style of learning, occupational and educational aspirations and study habits (rural children)

	Intellectual abilities	Style of learning	Study habits
Style of learning	.38		
Occupational aspirations	-.25	-.20	-.29
Occupational expectations	-.19	-.17	-.30
Educational aspirations	-.20	-.02*	-.20
Study habits	.18	.25	

Note: The variables occupational aspirations, occupational expectations and educational aspirations are reversed. Thus, any correlations involving these variables, if negative, are actually positive correlations.

*Correlations marked * are statistically not significant.

In the rural children, the correlation between intellectual abilities and style of learning was also positive and significant (.38). The hypothesis is confirmed.

The results indicate that intellectual abilities are related with style of learning even though not very strongly. More intelligent pupils generally have a better style of learning; they are better at interconnecting the learning material and they can also use it better in problem solving.

The correlation between these two variables was stronger in the urban children; most probably this was again a result of the problem mentioned earlier, namely the rural teachers' less objective way of evaluating. We believe that this tendency emerged not only in marking the rural children's knowledge and skills but also in the reports on their style of learning.

Hypothesis 10: There will be a positive relationship between intellectual abilities and occupational and educational aspirations.

In the urban children, the highest correlation was that between intellectual abilities and occupational aspirations (.23), that between intellectual abilities and educational aspirations was almost the same (.22) while the correlation between intellectual abilities and occupational expectations was lower (.16).

The picture was similar for the rural children. The highest correlation was between intellectual abilities and occupational aspirations (.25) followed by the correlations between intellectual abilities and educational aspirations (.20) and intellectual abilities and occupational expectations (.19) respectively.

The hypothesis is confirmed; the correlations between the variables examined were positive and significant even though not very strong. It seems that children at this stage are not yet thoroughly acquainted with the demands of different occupations, and at the same time do not yet evaluate their abilities critically enough.

Hypothesis 11: There will be a positive relationship between intellectual abilities and study habits.

The correlation between intellectual abilities and study habits in the urban children was .26 and in the rural children .18. In both cases the results confirm the hypothesis.

Although rather weak, the relation between these two variables was positive and significant. Study habits, reflected mainly in working schedules and in adequate ways of learning, are determined more by the factors of the familial and school media than by the child's intelligence.

Hypothesis 12: There will be a positive relationship between occupational and educational aspirations and style of learning.

In the urban children, style of learning correlated with educational aspirations .34, with occupational expectations .33 and with educational aspirations .31. All three correlations were positive and significant.

In the rural children, the correlations between these variables were lower. Style of learning correlated with occupational aspirations .20, with occupational expectations .17 and with educational aspirations .02. The first two correlations were significant but the last one was not; the hypothesis is thus not entirely confirmed.

The correlations between occupational and educational aspirations and style of learning were positive and significant but they were low. Pupils with higher occupational and educational aspirations did display a somewhat better style of learning but this tendency was valid more for the urban than rural children. Here again we assumed that the rural teachers presented a more subjective evaluation of their pupils' style of learning.

Hypothesis 13: There will be a positive relationship between study habits and style of learning.

The correlation between study habits and style of learning was .43 in the urban children and .25 in the rural children (see Tables 24, and 25). In both cases the correlations were positive and significant.

The urban and rural children's results confirm the hypothesis. The pupils who according to the teachers had a better style of learning also had better study habits. There was a connection between these two variables although at this stage it was not yet very pronounced.

Hypothesis 14: Study habits will correlate positively with occupational aspirations, occupational expectations and educational aspirations.

In the urban children, study habits correlated with educational aspirations .39, with occupational expectations .30 and with occupational aspirations .23. All the correlations were positive and significant. The picture was similar for the rural children. Study habits correlated with occupational expectations .30, with occupational aspirations .29 and with educational aspirations .20. The correlations are positive and significant.

These correlations are evidently low yet they indicate that pupils with higher occupational and educational aspirations have somewhat better study habits and vice versa - better study habits enable children to achieve better results in school which encourages their occupational and educational aspirations.

PREDICTOR-CRITERION RELATIONSHIPS

This chapter presents relationships between predictors and criteria of academic achievement. Reading test results, results of Achievement tests in various school subjects and the Grade point average were used as criteria. The school marks in various subjects are not presented as it was established in the previous comparisons that they correlated highly with the Grade point average. In the urban children these correlations ranges between .91 and .94, and in the rural children between .78 and .91 (see Tables 14 and 15).

Hypothesis 15: Occupational aspirations, occupational expectations and educational aspirations will correlate positively with academic achievement.

In the urban children, all the correlations between the motivation variables (occupational aspirations, occupational expectations and educational aspirations) and the criterion variables (achievement tests, Grade point average) were positive and significant. The correlations between motivation variables and achievement tests ranged between .26 and .36 while those between motivation variables and the Grade point average ranged between .35 and .39 (see Table 26). The hypothesis is confirmed entirely.

TABLE 26: Predictor-criterion relationships of academic achievement (urban children)

	Read. test	Slov. lang.	Math.	Soc. Stud.	Nat. Sc.	G.p.a.
Occupational aspirations**	-.34	-.26	-.26	-.31	-.29	-.35
Occupational expectations**	-.34	-.33	-.26	-.32	-.30	-.37
Educational aspirations**	-.36	-.36	-.27	-.29	-.26	-.39
Intellectual abilities	.54	.55	.59	.46	.44	.48
Style of learning	.64	.66	.68	.62	.61	.84
Study habits	.39	.34	.36	.37	.40	.38
Social behavior	.42	.43	.41	.40	.35	.58
Aggressive behavior**	.23	.23	.22	.16	.20	.27
Restless behavior**	.16	.18	.16	.12	.14	.26
Anxiety symptoms**	.34	.35	.34	.34	.32	.34
Neurotic symptoms**	.16	.16	.19	.18	.19	.19
Father's occupation**	-.37	-.39	-.41	-.34	-.39	-.50
Number of children in the family	-.18	-.19	-.16	-.16	-.15	-.20
Living space index	.24	.28	.28	.20	.21	.31
Co-operation of parents with school**	-.09*	-.12	-.07*	-.15	-.12	-.29

Note: *Correlation coefficients marked * are not statistically significant.

**Variables marked ** are reversed. Thus, any correlations involving these variables, if positive, are actually negative correlations, and if negative, are actually positive correlations.

TABLE 27: Predictor-criterion relationships of academic achievement (rural children)

	Read. test	Slov. lang.	Math.	Soc. Stud.	Nat. Sc.	G.p.a.
Occupational aspirations**	-.25	-.24	-.23	-.18	-.20	-.28
Occupational expectations**	-.24	-.26	-.23	-.18	-.21	-.26
Educational aspirations**	-.22	-.27	-.26	-.12*	-.14*	-.25
Intellectual abilities	.52	.49	.54	.44	.47	.50
Style of learning	.53	.54	.51	.46	.45	.76
Study habits	.38	.34	.25	.43	.31	.33
Social behavior	.36	.29	.27	.18	.10*	.51
Aggressive behavior**	.11*	.09*	.10*	.03*	.01*	.19
Restless behavior**	.10*	.08*	.10*	.06*	.02*	.18
Anxiety symptoms**	.28	.32	.26	.28	.29	.44
Neurotic symptoms**	.12*	.06*	.01*	.07*	.03*	.11*
Number of children in the family	-.09*	.02*	.01*	-.04*	-.02*	-.08*
Living space index	.01*	.09*	.13*	.07*	.01*	.03*
Co-operation of parents with school**	-.21	-.18	-.14	-.07*	-.07*	-.41

Note: * Correlation coefficient marked * are not statisticaly significant.

** Variables marked ** are reversed. Thus, any correlations involving these variables, if positive, are actually negative correlations, and if negative, are actually positive correlations.

In the rural children, the correlations between motivation variables and achievement tests ranged between .12 and .27. All the correlations were positive and **thirteen out of fifteen were** significant. The correlation between educational aspirations and Social Studies (.12) and that between educational aspirations and Natural Sciences (.14) were not significant. Motivation variables correlated a little higher with the Grade point average, i.e. from .25 to .28. The hypothesis is confirmed.

The correlations between the pupils' occupational and educational aspirations and their academic achievement were comparatively low. They still indicated, however, that children with higher occupational and educational aspirations do better in school and vice versa. The weak correlation can be explained if we consider that occupational and educational aspirations in ten-year-olds are still poorly formed and not realistic enough. This is particularly true of the rural children.

It should be emphasised, however, that occupational and educational aspirations are even at this stage quite an important factor in academic achievement and they grow increasingly more important throughout the years of schooling.

Hypothesis 16: There will be a positive relationships between intellectual abilities and academic achievement.

In the urban children, the correlations among intellectual abilities and achievement tests ranged between .44 (Natural Sciences) and .59 (Mathematics). The pupils' intellectual abilities correlated with their Grade point average, obtained from four basic subjects,.48. (See Table 26.) All the correlations were positive and moderate.

Rural children made a similar picture. The correlations among intellectual abilities and achievement tests ranged between .44 (Social Studies) and .54 (Mathematics). Intellectual abilities correlated with the Grade point average .50. (See Table 27.) The correlations were positive and moderate. The results confirm the hypothesis; pupils with better developed abilities excel in achievement tests and also have better school marks. Our results also indicate that a child's intellectual abilities figure as one of the most important factors in his academic achievement.

Hypothesis 17: There will be a positive relationship between style of learning and academic achievement.

In the urban children, the correlations between style of learning and achievement tests ranged between .61 (Natural Sciences) and .68 (Mathematics). These correlations are positive and high. Higher still was the correlation between style of learning and the Grade point average, namely .84.

In the rural children, the correlations between style of learning and achievement tests ranged between .45 (Natural Sciences) and .54 (Slovene language achievement test). The correlations were moderate and significant. The correlation between style of learning and the Grade point average, which amounted to .76, was considerably higher.

The hypothesis is entirely confirmed both for urban and rural children. On the whole, the results indicate that pupils with a better style of learning score higher in achievement tests and also have higher school marks.

The high correlations between style of learning and school marks give the impression that the former was evaluated under the influence of the latter. Children with higher school marks were consistently given higher scores for style of learning, and vice versa. The correlations between style of learning and achievement test results are somewhat lower and probably more adequately reflect the relationships between these variables.

Hypothesis 18: There will be a positive relationship between study habits and academic achievement.

In the urban children, the correlations between study habits and achievement test results ranged from .34 (Slovene language achievement test) to .40 (Natural Sciences). The correlation with the Grade point average, which amounted to .38 (see Table 26), was similar. The correlations are positive and significant.

In the rural children, the correlation coefficients between study habits and achievement tests ranged from .25 (Mathematics) to .43 (Social Studies). The correlation with the Grade point average was .33 (see Table 27). The correlations are positive and significant.

The results of the urban and rural children confirm the hypothesis entirely. Generally speaking, pupils with better study habits score higher in achievement tests and have higher school marks. This tendency is obvious. Yet it should be emphasized that there is a weak correlation between study habits and academic achievement if compared to that between academic achievement and intelligence.

Hypothesis 19: There will be a positive relationship between social behavior and academic achievement.

In the urban children the correlation between social behavior and achievement test results ranged from .35 (Natural Sciences) to .43 (Slovene language achievement test). The correlation with the Grade point average is higher, amounting to .58 (see Table 26). All the correlations are positive and significant.

These correlations are somewhat lower in the rural children. With achievement tests they range from .10 (Natural Sciences) to .36 (Reading achievement). There is, however, a higher correlation with the Grade point average which amounts to .51 (see Table 27). Here again, the correlations are positive and all but one significant.

The urban and rural children's results confirm the hypothesis. More sociable children score higher in achievement tests and have higher school marks. The correlation of this predictor with academic achievement is not high yet sociability is an important factor not only in the child's personality development but also in his academic achievement.

It is interesting that social behavior correlates higher with the Grade point average than with achievement test results. This indicates that children with more appropriate social behavior obtain slightly higher marks in school.

Hypothesis 20: There will be a negative relationship between aggressive behavior and academic achievement.

In the urban children, the correlations between aggressive behavior and achievement test results range from -.16 (Social Studies) to -.23 (Reading Achievement, Slovene language). The correlation with the Grade point average is -.27 (see Table 26). All the correlations are negative and significant. The hypothesis is entirely confirmed.

The hypothesis is not confirmed for the rural pupils, however. The correlation coefficients between pupils' aggression and their achievement test results range from -.01 to -.11. The correlations are negative but not significant. There is a significant correlation, however, between aggression and the Grade point average, amounting to -.19 (see Table 27).

In the urban children there is a tendency that pupils behaving in a more aggressive manner will have less success in achievement tests and have lower school marks, and vice versa. It should be underlined, however, that there is only a weak correlation between this variables and academic achievement. In the rural children, this tendency was observed only in the case of school marks. It seems that teachers are inclined to give more aggressive pupils somewhat lower marks.

Hypothesis 21: There will be a negative relationship between restless behavior and academic achievement.

In the urban children, the correlations between restless behavior and achievement test results range from -.12 (Social Studies) to -.18 (Slovene language) while the correlation with the Grade point average is -.26 (see Table 26). All these correlations are negative and significant, therefore the hypothesis is entirely confirmed.

The hypothesis is not confirmed for the rural children, however. The correlations between restless behavior and achievement test results range from -.02 to -.10 (see Table 27). These coefficients are negative but not significant. The correlation with the Grade point average, however, is somewhat higher and significant, amounting to -.18.

The results indicate that the hypothesis entirely confirmed only for the urban pupils. The tendency was observed for restless pupils to obtain poorer scores in achievement tests and have lower school marks. It should be added, though, that this correlation is weak.

Hypothesis 22: There will be a negative relationship between anxiety symptoms, and academic achievement.

In the urban children, the correlations between anxiety symptoms and achievement test results range from -.32 (Natural Sciences) to -.35 (Slovene language). Anxiety correlates similarly with the Grade point average; the coefficient is -.34 (see Table 26). All these correlations are negative and significant.

The picture is similar for the rural children. The correlation coefficient between anxiety symptoms and achievement test results ranges from -.26 (Mathematics) to -.32 (Slovene language). There is a higher correlation with the Grade point average, amounting to -.44 (see Table 27). All these correlations are negative and significant.

The urban and rural children's results confirm the hypothesis entirely. It can be concluded from the correlations that anxiety has a negative effect on academic achievement. More anxious children do worse in school. The correlation between these variables is not very strong but the negative effect of anxiety is nevertheless such that it requires more attention in school.

Hypothesis 23: There will be a negative relationship between neurotic symptoms and academic achievement.

The correlations between the neurotic symptoms of urban children and their academic achievement range from -.16 (reading achievement) to -.19 (Mathematics and Natural Sciences). The correlation with the Grade point average also amount to -.19 (see Table 26). All the correlations are negative and significant and the hypothesis is entirely confirmed.

The hypothesis is not confirmed for the rural children, however. The correlation coefficients between neurotic symptoms and achievement test results range from -.01 to -.12. The correlation of this variable with the Grade point average is -.11 (see Table 27). All these correlations are negative yet none of them is significant.

It was observed in the urban children that more neurotic pupils obtain poorer scores in achievement tests and have somewhat lower school marks. This correlation, however, is rather low and is more pronounced only in exceptional cases, i.e. in very neurotic pupils.

Hypothesis 24: There will be a positive relationship between the father's occupation and the children's academic achievement.

This hypothesis was tested only in the urban children because their fathers have occupations which on the scale of occupations vary from 1 do 6. The rural children come from peasant or semi-peasant families and therefore their fathers have a more or less equal position on the scale of occupations. For this reason the correlation between these two variables was not calculated. The correlations between the father's occupation and the urban children's achievement test results range from -.34 (Social Studies) to .41 (Mathematics). The correlation with the Grade point average is higher still, amounting to .50 (see Table 26). All the correlations are positive and significant.

The urban children's results confirm the hypothesis entirely. Children of parents who occupy a better position on the scale of occupations score higher on achievement tests and have higher school marks. The connection between these two variables is quite evident at this stage of schooling since the correlations obtained can be considered moderate. It seems that children's academic achievement also depends directly and indirectly on the parents' education. More educated parents can help the child with studying and coping with problems in school, provide him with motivation and stimulate his educational aspirations.

Hypothesis 25: There will be a negative relationship between the number of children in the family and academic achievement.

In the urban children the correlations between these two variables range from -.15 (Natural Sciences) to -.19 (Slovene language). There is a similar correlation with the Grade point average, namely -.20 (see Table 26). All the correlations are negative and significant which confirms the hypothesis.

The hypothesis, however, is not confirmed for the rural children. The correlations between the number of children in the family and achievement test results range from -.09 to .02. The correlation with the Grade point average is -.08 (see Table 27). None of the correlations is significant.

In the urban children there is a tendency for the number of children in the family to correlate negatively with academic achievement yet the correlation is weak. No such tendency was observed in the rural children.

Hypothesis 26: There will be a positive relationship between the living space index and children's academic achievement.

The living space index was calculated by dividing the number of rooms with the number of family members. Thus, the higher the index, the more favourable the housing conditions. In the urban children the correlation between this variable and Academic achievement ranged from .20 (Social Studies) to .28 (Slovene language and Mathematics). The corelation of this variable with the Grade point average is .31 (see Table 26). All the correlations are positive and significant. The results of these pupils confirm the hypothesis entirely.

The hypothesis is not confirmed for the rural children, however. The correlation between the living space index and achievement test results range from .01 to .09. The correlation with the Grade point average is .03 (see Table 27). None of these correlations is statistically significant.

In the urban children there was a connection between the living space index and children's academic achievement. The children who live in better housing conditions are generally more successful in school than others. It should be emphasised, though, that this correlation is weak. There are only exceptional cases of very poor housing conditions which may hinder a child in his academic achievement.

In the rural children the differences in the housing conditions are smaller and the correlation did not reflect them.

Hypothesis 27: There will be a positive relationship between co-operation of parents with school and children's academic achievement.

In the urban children the correlations between these two variables range from .07 to .15. Three correlations out of five are significant. This variable correlates higher and significantly with the Grade point average, however, where it amounts to .29 (see Table 26).

In the rural children the correlations between this variable and achievement test results range from .07 to .21. Three correlations out of five are significant. The correlation with the Grade point average is considerably higher, amounting to .41 (see Table 27).

In conclusion it can be stated that co-operation of parents with school correlates positively with the school marks of both urban and rural children. The children of parents who co-operate with teachers obtain higher school marks and also score higher in some achievement tests. The hypothesis can in general be accepted. It is interesting that the correlation of this variable is stronger with school marks than with achievement test results. Teachers evidently favour and give slightly better marks to those children whose parents co-operate better with the school.

RESULTS OF 8th GRADE PUPILS AND DISCUSSION

DIFFERENCES BETWEEN CHILDREN FROM LARGE AND SMALL TOWNS, BETWEEN CHILDREN FROM SEMI-PEASANT AND PEASANT AREAS AND BETWEEN URBAN AND RURAL CHILDREN

The results of 8th grade pupils

In this chapter will try to answer the question whether there are any differences in academic achievement and certain personality characteristics between 8th grade pupils from large and small towns. As is evident from the sample description, towns were divided into three groups with regard to the number of inhabitants: T-1, T-2 and T-3. Our hypothesis was that the children would differ significantly with regard to the size of the town in which they lived. The larger the town, the better the children would be expected to do in school, they would have more developed intellectual abilities, higher occupational and educational aspirations, better study habits and style of learning and would also differ in other personality characteristics from small town children.

We were also interested in the academic achievement of rural children. These were divided, with regard to demo-geographic and social characteristics, into two groups: R-1 (semi-peasant areas) and R-2 (peasant areas). Again we expected to find that R-1 children would do better in school, have more developed intellectual abilities, higher occupational and educational aspirations, better study habits and style of learning and that they would differ in certain personality characteristics from P-2 children.

We were particularly interested to find out whether there were any differences between urban and rural children. In this comparison, the R-1 and R-2 children were pooled and treated together as rural (R). The rural children's results are first compared with those of unqualified workers' children and then with qualified workers' children. These urban children and their rural age-mates live in families with a similar socio-economic status (SES). Therefore this comparison did not cover children of parents who are professional workers with completed secondary of university education. Our hypothesis was that urban children (of qualified and unqualified workers) would do better in school, have more developed intellectual abilities, higher occupational and educational aspirations, better study habits and style of learning and would also differ in other personality characteristics from rural children.

Reading Achievement

7.1.* The town children received the following mean scores in the reading achievement test:

Groups	M	SD	F-test	p
T-1	84.16	14.18		
T-2	80.10	13.71	4.07	.05
T-3	83.20	14.60		

The results do not confirm the hypothesis entirely. The highest scores were received by T-1 children, followed closely by T-3 children, while T-2 children's scores were significantly lower. The differences are statistically significant but they are in fact very small and they probably have only a minor effect on the children's academic achievement as such.

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*The ciphers correspond with the hypothesis numbers (see page 42).

8.1. The rural children received the following mean scores in the reading achievement test:

Groups	M	SD	F-test	p
R-1	62.57	17.33	5.08	.05
R-2	57.66	14.66		

The hypothesis is confirmed. The children from semi-peasant areas (R-1) obtained higher scores than their age-mates from peasant areas (R-2). There are also differences in variability. R-1 children display greater variability in reading achievement than R-2 children.

9.1.(a) A comparison between the children of unqualified town workers (U) and the rural children (R-1 and R-2 combined into R) revealed the following:

Groups	M	SD	F-test	p
U	78.01	14.34	119.90	.001
R	60.09	16.23		

The hypothesis is confirmed. The children of unqualified town workers received significantly higher scores in the reading achievement test. The rural children's reading abilities if compared with those of their urban age-mates appear rather poor.

9.1.(b) A comparison between the children of qualified town workers (Q) and the rural children (R) showed the following:

Groups	M	SD	F-test	p
Q	81.25	13.53	181.30	.001
R	60.09	16.23		

The hypothesis is confirmed. In reading achievement, the children of qualified town workers excel significantly and the differences are quite large. There are also significant differences in variability. Rural children display greater variability in reading achievement than this group of urban children.

The test results indicated that the urban children of both qualified and unqualified workers read significantly better than their rural age-mates. An elaborate analysis revealed large differences in reading speed and reading comprehension and quite large ones in vocabulary. The rural children are far behind their urban age-mates in this respect which may hinder them in achieving a better success in school subjects and also in further schooling.

Slovene language achievement

7.1. The children from large and small towns received the following mean scores in the Slovene language achievement test:

Groups	M	SD	F-test	p
T-1	91.69	14.56		
T-2	88.04	15.14	4.46	.01
T-3	87.76	16.17		

The hypothesis is confirmed entirely. The children from large towns (T-1) have a better command of Slovene than their small town (T-2 and T-3) age-mates while the children from small towns (T-2 and T-3) have practically the same results. The difference is statistically significant but from the educational standpoint it does not amount to much.

7.2. The school marks received by the town children are as follows:

Groups	M	SD	F-test	p
T-1	3.39	1.00		
T-2	3.27	.98	.14	.n.s.
T-3	3.32	1.04		

The hypothesis is rejected. The teachers gave the children from large and small towns aproximately the same marks. Despite the fact that the T-1 children displayed a slightly better knowledge of Slovene they still received on average the same marks as their T-2 and T-3 age-mates.

8.1. The rural children received the following mean scores in the Slovene language achievement test:

Groups	M	SD	F-test	p
R-1	79.10	14.87	2.18	n.s.
R-2	76.23	14.40		

The hypothesis is not confirmed. The children from semi-peasant and those from peasant areas do not differ significantly in their command of Slovene.

8.2. Neither is there any support for the hypothesis from the teachers' marks. The mean marks were as follows:

Groups	M	SD	F-test	p
R-1	3.08	.91	1.54	n.s.
R-2	3.24	.94		

The hypothesis is rejected again. The children from the two rural areas have more or less the same mean marks in this subject.

9.1.(a) The children of unqualified town workers and the rural children received the following mean scores in the Slovene language achievement test:

Groups	M	SD	F-test	p
U	84.98	14.48	23.14	.001
R	77.65	14.71		

The hypothesis is confirmed. The children of unqualified town workers have a significantly better knowledge of their mother tongue than the country children.

9.2.(a) The school marks in the subject seemed to confirm the very opposite. The mean marks were as follows:

Groups	M	SD	F-test	p
U	2.91	.84	7.46	.01
R	3.17	.93		

The hypothesis is rejected as the rural children received significantly higher school marks than did the children of unqualified town workers even though in the achievement test the latter excelled.

9.1.(b) The children of qualified town workers and the rural children received the following mean scores in the Slovene language achievement test:

Groups	M	SD	F-test	p
Q	86.38	15.80	32.65	.001
R	77.65	14.71		

The hypothesis is confirmed. The children of qualified town workers displayed a significantly better knowledge of their mother tongue than did the rural children. From the educational point of view, these differences are quite large.

9.2.(b) The teachers' marks, however, do not confirm the hypothesis.

Groups	M	SD	F-test	p
Q	3.16	.96	.02	n.s.
R	3.17	.93		

The results indicated that the two groups received on average approximately the same marks although, as stated before, they differed significantly in the achievement test results.

The Achievement test results confirmed that the children of both qualified and unqualified town workers master the Slovene language remarkably better than the rural children. This problem presents a hindrance for the latter group in learning not only this but also other subjects. It also creates difficulties concerning any further schooling where linguistic coping is essential.

In the picture presented by the teachers' marks on the subject, however, these differences were rather obscured. This was particularly evident in the case of the children of unqualified town workers who were given lower marks than the rural children even though excelling significantly in the objective test. A similar tendency was observed in the case of the children of qualified town workers who were given the same marks as the rural children even though they proved to have a significantly better knowledge of the sucject. This is a consequence of the fact that the rural teachers use milder criteria for marking their pupils' performance than do the town teachers. The children of unqualified town workers and partly also the children of qualified town workers thus receive relatively lower school marks.

Mathematics achievement

7.1. The children from large and small towns received the following mean scores in the Mathematics achievement test:

Groups	M	SD	F-test	p
T-1	13.77	5.57		
T-2	14.06	5.14	.63	n.s.
T-3	14.43	6.04		

The hypothesis is rejected. The children from large and small towns have an approximately equal knowledge of Mathematics.

7.2. A comparison of the mean marks in the subject produced a similar picture. The teachers gave their pupils the following marks:

Groups	M	SD	F-test	p
T-1	3.14	1.00		
T-2	3.07	.97	.58	n.s.
T-3	3.17	1.03		

The children from large and small towns received approcimately the same marks in Mathematics.

8.1. The children from both rural areas received the following mean scores in the Mathematics achievement test:

Groups	M	SD	F-test	p
R-1	8.92	3.74	5.08	.05
R-2	7.72	3.86		

The hypothesis is confirmed. However, even though the children from semi-peasant areas did score significantly higher than their age-mates from peasant areas, the difference from the educational standpoint does not have much significance.

8.2. The teachers' marks, on the other hand, do not confirm the hypothesis.

Groups	M	SD	F-test	p
R-1	2.85	.89	4.00	.05
R-2	3.13	1.06		

The children from peasant areas received on average higher marks even though the children from semi-peasant areas did better in the Mathematics achievement test.

9.1.(a) The children of unqualified town workers and the rural children received the following mean scores in the Mathematics achievement test:

Groups	M	SD	F-test	p
U	12.62	5.15	84.95	.001
R	8.32	3.85		

The hypothesis is confirmed. The children of unqualified town workers received significantly higher scores in the Mathematics achievement test than did their rural age-mates. The differences between the two groups are from the educational point of view quite noteworthy. Variability is also greater in the urban than in the rural children.

9.2.(a) Once again, the teachers' marks presented quite the opposite picture and so the hypothesis is rejected. The children received the following marks:

Groups	M	SD	F-test	p
U	2.80	.91	3.73	n.s.
R	2.99	.99		

The rural children received on average slightly higher marks in the subject although the children of unqualified town workers excelled significantly in the achievement test.

9.1.(b) The differences between the children of qualified town workers and the rural children were greater still. The mean scores in the Mathematics achievement test were:

Groups	M	SD	F-test	p
Q	13.17	5.29	106.64	.001
R	8.32	3.85		

The hypothesis is strongly confirmed. The results indicated that the children of qualified town workers have a significantly better knowledge of Mathematics than did the rural children. The difference is from the educational standpoint very large. There is also a significant difference in variability which is greater in the urban than in the rural children.

9.2.(b) The teachers' marks, however, provided no support for these findings. The mean marks were:

Groups	M	SD	F-test	p
Q	2.94	.94	.25	n.s.
R	2.99	.99		

The two groups of children received practically the same marks even though in the objective test results they differed very much.

In conclusion it can be stated that the children of both qualified and unqualified town workers have a considerably better knowledge of Mathematics than the rural children. From the educational point of view these differences are quite large which could possibly hinder many of the rural children in their further schooling.

The school marks do not present the state of affairs adequately. This is particularly evident in the case of the children of unqualified town workers who were given on average lower marks than the rural children even though excelling significantly in the objective test. A similar tendency is observed in the case of the children of qualified town workers. It is quite evident that the rural teachers use milder and their town colleagues more severe criteria in marking their pupils' performance.

English language achievement

7.1. The children from large and small towns received the following mean scores in the English language achievement test:

Groups	M	SD	F-test	p
T-1	38.07	12.17		
T-2	33.98	10.22	6.41	.01
T-3	34.02	11.19		

The results do not confirm the hypothesis entirely. The children from large towns received significantly higher scores than the children from small towns (T-2 and T-3). The T-2 and T-3 children received practically the same results.

7.2. The school marks di not confirm the hypothesis. The mean marks were as follows:

Groups	M	SD	F-test	p
T-1	3.18	1.01		
T-2	3.25	1.11	1.15	n.s.
T-3	3.26	1.17		

The children from large and small towns received approximately the same marks in the subject although the children from large towns did somewhat better in the achievement test.

8.1. In most of the rural schools included in the sample, the foreign language taught is not English and therefore the number of children in this comparison covers only 23% of the whole rural sample. The rural children's mean scores in the English language achievement test are as follows:

Groups	M	SD	F-test	p
R-1	27.47	7.48	1.37	n.s.
R-2	25.16	8.95		

The hypothesis is rejected. The children from the two rural groups do not differ significantly in their knowledge of English. There are, however, differences in variability which is greater in peasant than in semi-peasant children.

8.2. Neither is there any support for the hypothesis from the school marks. They are as follows:

Groups	M	SD	F-test	p
R-1	3.20	1.01	.06	n.s.
R-2	3.16	1.14		

The children from semi-peasant and those from peasant areas received approximately the same marks in English.

9.1.(a) The children of unqualified town workers and the rural children received the following mean scores in the English language achievement test:

Groups	M	SD	F-test	p
U	31.42	10.49	10.01	.01
R	26.61	8.14		

The hypothesis is confirmed. The children of unqualified town workers have a significantly better command of English than their rural age-mates. There is also a significant difference in variability which is greater in the urban than in the rural children.

9.2.(a) The mean teachers' marks on the subject do not confirm the hypothesis. They are as follows:

Groups	M	SD	F-test	p
U	2.88	.98	2.97	n.s.
R	3.18	1.06		

The school mark difference is not significant although the children of unqualified town workers proved to have a somewhat better knowledge of English than the rural children.

9.1.(a) The average differences between the children of qualified town workers and the rural children were larger still. The scores in the English language achievement test were as follows:

Groups	M	SD	F-test	p
Q	33.52	10.17	20.98	.001
R	26.61	8.14		

The hypothesis is confirmed. The children of qualified town workers displayed a significantly better knowledge of English than did their rural age-mates. From the educational point of view, these differences are quite large. Here again, greater variability was observed in the urban children's achievements.

9.2.(b) The teachers' marks, however, do not confirm the hypothesis. They are as follows:

Groups	M	SD	F-test	p
Q	3.00	1.03	.71	n.s.
R	3.18	1.06		

The children of qualified town workers received approximately the same marks as did the rural children who scored significantly lower in the English language achievement test. It is interesting, though, that the differences in the objective test results between the urban and rural children were in this subject smaller than in other subjects although they were still quite large. No differences were observed in the teachers' marks, which indicated again that the rural teachers use milder marking criteria than do their town colleagues. It should be noted, though, that this tendency was not as pronounced in this subject as it was in others.

History achievement

7.1. The children from large and small towns received the following mean scores in the History achievement test:

Groups	M	SD	F-test	p
T-1	27.47	7.88		
T-2	26.22	8.76	1.12	n.s.
T-3	26.72	8.22		

The hypothesis is not confirmed as the children from large and small towns displayed approximately the same knowledge of History.

7.2. Neither do the teachers' marks support the hypothesis. The mean marks are as follows:

Groups	M	SD	F-test	p
T-1	3.50	.98		
T-2	3.59	1.06	2.78	n.s.
T-3	3.72	1.03		

It is evident that the children from large and small towns received approximately the same marks.

8.1. The children from the two rural areas did differ, however, in the History achievement test results. The mean scores were as follows:

Groups	M	SD	F-test	p
R-1	20.73	8.18	11.46	.001
R-2	17.13	7.94		

The hypothesis is confirmed. The children from semi-peasant areas displayed a significantly better knowledge of History than their age-mates from rural areas.

8.2. The teachers' marks di not confirm the hypothesis. The mean marks are as follows:

Groups	M	SD	F-test	p
R-1	3.47	1.01	2.12	n.s.
R-2	3.27	1.00		

The two groups of children did not differ significantly in the school marks received for the subject although the R-1 children did significantly better in the History achievement test.

9.1.(a) The children of unqualified town workers and the rural children had the following History achievement test results:

Groups	M	SD	F-test	p
U	24.25	8.00	39.08	.001
R	18.92	8.26		

The hypothesis is confirmed as the children of unqualified town workers scored significantly higher than did their rural age-mates. From the educational standpoint, the differences are quite large.

9.2.(a) The school marks, however, presented a different picture. The teachers gave their pupils the following marks:

Groups	M	SD	F-test	p
U	3.25	.97	1.38	n.s.
R	3.37	1.01		

The two groups did not differ significantly in the school marks received for the subject despite the fact that the children of unqualified town workers displayed a significantly better knowledge of History.

9.1.(b) The differences between the children of qualified town workers and the rural children were greater still. The mean test results were as follows:

Groups	M	SD	F-test	p
Q	26.40	7.99	80.09	.001
R	18.92	8.26		

The hypothesis is confirmed. The children of qualified town workers displayed a significantly better knowledge of History than did their rural age-mates. From the educational point of view, the average difference is rather large.

9.2.(b) The teachers' marks, however, do not support the hypothesis. The mean marks are as follows:

Groups	M	SD	F-test	p
Q	3.40	1.00	.11	n.s.
R	3.37	1.01		

The two groups did not differ in the school marks received for the subject although in the objective test the children of qualified town workers scored significantly higher than the rural children.

In conclusion it can be stated that the children of both qualified and unqualified town workers have a significantly better knowledge of History than do the rural children. This, however, was not at all reflected in the school marks which the children received in the subject. Once again it is obvious that urban and rural teachers use different criteria in marking their pupils' performance.

Biology achievement

7.1. The town children received the following mean scores in the Biology achievement test:

Groups	M	SD	F-test	p
T-1	54.01	12.52		
T-2	53.87	15.22	1.51	n.s.
T-3	51.82	11.46		

The hypothesis is rejected. The higher scores were received by T-1 children, followed by T-2 and T-3 children respectively but the average differences were very small and statistically not significant. There are, however, significant differences in variability which is greater in T-2 children than in T-1 and T-3 children.

7.2. A very similar pictures was obtained when comparing their school marks in Biology. The mean marks were as follows:

Groups	M	SD	F-test	p
T-1	3.53	.98		
T-2	3.53	1.06	2.47	n.s.
T-3	3.71	1.01		

It is evident that the children from large and small towns do not differ significantly in the school marks received in the subject.

8.1. The rural children received the following mean scores in the Biology achievement test:

Groups	M	SD	F-test	p
R-1	42.13	11.99	5.91	.05
R-2	38.37	9.91		

The hypothesis is confirmed. The children from semi-peasant areas proved to have a better knowledge of Biology than their age-mates from peasant areas but the differences was not very pronounced.

8.2. There were no significant differences between the two groups in the school marks received in the subject. The mean marks were as follows:

Groups	M	SD	F-test	p
R-1	3.51	.99	2.25	n.s.
R-2	3.32	.92		

The children did not differ in the school marks received although the children from semi-peasant areas proved to have a somewhat better command of the subject.

9.1.(a) The children of unqualified town workers and the rural children received the following mean scores in the Biology achievement test:

Groups	M	SD	F-test	p
U	49.59	11.90	59.50	.001
R	40.19	11.13		

The hypothesis is confirmed. The children of unqualified town workers displayed a significantly better knowledge of Biology than did the rural children. From the educational point of view, the differences were quite large.

9.2.(a) The teachers' marks do not support the hypothesis at all. The mean marks are as follows:

Groups	M	SD	F-test	p
U	3.22	.92	3.97	.05
R	3.42	.96		

The rural children received significantly higher marks in Biology than the children of unqualified town workers even though the latter excelled significantly in the achievement test.

9.1.(b) The differences between the children of qualified town workers and the rural children were larger still. The mean scores in the Biology achievement test were as follows:

Groups	M	SD	F-test	p
Q	51.65	10.30	103.11	.001
R	40.19	11.13		

The hypothesis is confirmed as the children of qualified town workers proved to have a significantly better knowledge of Biology than their rural age-mates. From the educational point of view, the differences were very large.

9.2.(b) This state of affairs was not reflected by the school marks, however. The teachers gave their pupils the following marks:

Groups	M	SD	F-test	p
Q	3.40	1.00	.01	n.s.
R	3.42	.96		

The two groups did not differ in the school marks received although the children of qualified town workers obtained remarkably better results in the achievement test.

On the whole, the results indicated once again that the children of both qualified and unqualified town workers have a considerably better knowledge of the subject than the rural children. The differences were large enough to be quite significant from the educational point of view.

It can also be observed that these differences were again quite obscured in the picture presented by the teachers' marks. By and large, the rural children had the same marks as the urban children. It is evident that the teachers' marking criteria for their pupils' performance are rather relative.

Grade point average

Grade point average for each pupils was obtained by taking into account the school marks that the pupil received at the end of the school year for the following subjects: Slovene, English, Mathematics, History, Geography, Biology, Physics and Chemistry.

7.2. The children from large and small towns had the following Grade point average:

Groups	M	SD	F-test	p
T-1	3.34	.88	1.85	n.s.
T-2	3.35	.90		
T-3	3.47	.93		

The results do not support the hypothesis. The children from large and small towns had approximately the same Grade point average.

8.2. The rural children had the following Grade point average:

Groups	M	SD	F-test	p
R-1	3.26	.82	.21	n.s.
R-2	3.21	.82		

Again, the hypothesis is rejected. The children from semi-peasant areas and those from peasant areas did not differ significantly in their Grade point average.

9.2.(a) A comparison between the children of unqualified town workers and the rural children revealed the following:

Groups	M	SD	F-test	p
U	3.02	.80	6.25	.01
R	3.23	.82		

The hypothesis was based on the assumption that the town children would have a higher Grade point average than the rural children. The results, however, confirmed the very opposite namely, the rural children had a significantly higher Grade point average than urban children. The hypothesis is therefore rejected.

9.2.(b) A comparison between the children of qualified town workers and the rural children revealed the following:

Groups	M	SD	F-test	p
Q	3.21	.85	.03	n.s.
R	3.23	.82		

The hypothesis is rejected again. The children of qualified town workers and the rural children had approximately the same Grade point average.

The results indicated that the rural children had a significantly higher Grade point average than the children of unqualified town workers even though the latter had significantly better results in all achievement tests. The difference in their command of the school subjects was larger still if comparing the children of qualified town workers and the rural children while on the other hand the two groups did not differ in their Grade point average. It is clearly seen that the subjective marks are not in accordance with the pupils' achievement results.

Intellectual abilities

7.3. The town children received the following mean scores in the Lorge-Thorndike intelligence test:

Groups	M	SD	F-test	p
T-1	43.52	10.63	1.68	n.s.
T-2	43.01	12.03		
T-3	41.33	13.07		

The hypothesis is rejected. The children from large and small towns do not differ significantly in the intelligence test scores. There is, however, a significant difference in variability between T-1 and T-3 children. It is greater in T-3 children where there are more pupils with lower scores than among T-1 children. There is also a Towns x Sex interaction. Boys and girls do not differ in intelligence in large towns T-1 while in small towns T-2 and T-3 boys excel over girls.

8.3. The rural children received the following scores:

Groups	M	SD	F-test	p
R-1	31.65	11.20	.82	n.s.
R-2	30.14	11.55		

The hypothesis is rejected again. The children from semi-peasant and those from peasant areas received practically the same scores in the intelligence test. The difference was not statistically significant.

3.3.(a) A comparison between the children of unqualified town workers and the rural children revealed the following:

Groups	M	SD	F-test	p
U	39.14	12.80	42.39	.001
R	30.89	11.40		

The hypothesis is confirmed. The children of unqualified town workers received significantly higher scores in the intelligence test than did their rural age-mates. From the educational standpoint, these average difference are quite large.

9.3.(b) The average differences between the children of qualified town workers and the rural children were larger still. The mean scores were:

Groups	M	SD	F-test	p
Q	41.05	10.49	79.16	.001
R	30.89	11.40		

The hypothesis is confirmed; the children of qualified town workers received significantly higher scores than did the rural children. The differences between them are from the educational point of view very large.

The results indicate that the children of both qualified and unqualified town workers have more developed intellectual abilities than the rural children. The differences are sufficiently large to hinder many of the rural children from achieving better results in primary school and consequently in further schooling.

Occupational aspirations and expectations

For the purpose of this investigation we used a six-point rating scale where a lower numeral value stands for higher occupational aspirations. The same six-point rating scale was used for occupational expectations.

7.4. The town children expressed the following occupational aspirations:

Groups	M	SD	F-test	p
T-1	2.54	1.26		
T-2	2.73	1.27	1.27	n.s.
T-3	2.66	1.35		

The hypothesis is not confirmed. The children from large and small towns did not differ significantly in their occupational aspirations.

The town children's occupational expectations produced a similar picture:

Groups	M	SD	F-test	p
T-1	2.73	1.29		
T-2	2.89	1.29	2.77	n.s.
T-3	2.99	1.32		

The hypothesis is rejected again. The children from large and small towns did not differ significantly in their occupational expectations. It should be noted that the children's occupational aspirations were somewhat higher than their expectations.

8.4. The rural children expressed the following occupational aspirations:

Groups	M	SD	F-test	p
R-1	3.51	1.24	7.96	.01
R-2	3.97	1.15		

The hypothesis is confirmed. The children from semi-peasant areas had significantly higher occupational aspirations than their age-mates from peasant areas.

Similarly, there were significant differences between them in occupational expectations:

Groups	M	SD	F-test	p
R-1	3.83	1.04	13.09	.001
R-2	4.32	1.01		

The hypothesis is confirmed. The children from semi-peasant areas expressed higher occupational expectations than the children from peasant areas. Occupational expectations are in general lower than aspirations. It seems that many children are already aware of the fact that their aspirations might not be entirely fulfilled.

9.4.(a) A comparison between the children of unqualified town workers and the rural children revealed the following:

Groups	M	SD	F-test	p
U	3.28	1.15	14.13	.001
R	3.75	1.21		

The hypothesis is confirmed. The children of unqualified town workers had significantly higher occupational aspirations than the rural children. The children of unqualified town workers wished to achieve the following occupations: professional workers with completed college or university education 27.2%, professional worker with completed secondary school 34.1%, qualified worker 37.8% and unqualified worker .9% only.

The rural children's aspirations were different: professional with completed college or university education 16.9%, professional worker with completed secondary education 26.1%, qualified worker 52.5%, unqualified worker 2.7%. It is interesting that merely 1.8% of the rural children wished to become farmers.

Similarly, there were differences between the two groups in occupational expectations:

Groups	M	SD	F-test	p
U	3.58	1.07	19.62	.001
R	4.08	1.05		

The hypothesis is confirmed. The children of unqualified town workers had significantly higher occupational expectations than the rural children.

9.4.(b) The difference in occupational aspirations appears as rather large when comparing the children of qualified town workers and the rural children. The mean results are:

Groups	M	SD	F-test	p
Q	2.86	1.24	49.27	.001
R	3.75	1.21		

The hypothesis is confirmed. The children og qualified town workers aspire to more demanding occupations than their rural age-mates. The former wish to achieve the following occupations: professional worker with completed college or university education 41.3%, professional worker with completed secondary education 29.8%, qualified worker 28.1% and unqualified worker .8% only. Comparing these data with those for the rural children we see that the difference in occupational aspirations is quite large. In general it would seem that most of the children of both qualified and unqualified town workers wish to become professional workers while most of the rural children wish to become qualified workers.

There are also significant differences between the two groups in occupational expectations. The mean results are:

Groups	M	SD	F-test	p
Q	3.10	1.21	70.58	.001
R	4.08	1.05		

The hypothesis is confirmed. The children of qualified town workers have significantly higher occupational expectations than the rural children.

Educational aspirations

We also examined the children's educational aspirations. The children were questioned about the level of education they would like to achieve. The five-point rating scale was used where a lower numeral value stands for higher educational aspirations (1 stands for university education and 5 for primary school).

7.5. The town children expressed the following educational aspirations:

Groups	M	SD	F-test	p
T-1	2.43	1.21		
T-2	2.62	1.14	1.45	n.s.
T-3	2.51	1.15		

The hypothesis is not confirmed. The children from large and small towns do not differ significantly in their educational aspirations.

8.5. Nor are there any significant differences between the two groups of rural children. The mean results are:

Groups	M	SD	F-test	p
R-1	3.48	.66	1.60	n.s.
R-2	3.62	.66		

The hypothesis is rejected as the children from semi-peasant and those from peasant areas do not differ significantly in their educational aspirations.

9.5.(a) A comparison between the urban and rural children, however, showed significant differences in this respect. The mean results are:

Groups	M	SD	F-test	p
U	3.20	.96	16.18	.001
R	3.55	.67		

The hypothesis is confirmed. The children of unqualified town workers have significantly higher educational aspirations than the rural children. There is also a significant difference in variability which is greater in the urban than in the rural children. A larger number of urban children wish to acquire a better education. A detailed analysis revealed that unqualified workers' children wish to acquire the following education: university or college education 21.4%, completed secondary education 15.4% and various schools for qualified workers 46.9%.

The rural children see their education differently. Their aspirations are the following: university or college education 6.9%, completed secondary education 29.3% and various schools for qualified workers 63.8%.

9.5.(b) The differences between the children of qualified town workers and the rural children are larger still. The mean results are as follows:

Groups	M	SD	F-test	p
Q	2.75	1.06	74.69	.001
R	3.55	.67		

The hypothesis is confirmed. An elaborate analysis revealed the following educational aspirations among the children of qualified town workers: university or college education 35.8%, completed secondary education 33.1%, various schools for qualified workers, 31.1%. Comparing these results with those of the rural children we see that the two groups differ considerably - more than a third of the children of qualified town workers wish to achieve university of college education while only handful (6.9%) of the rural children expressed such aspirations. Nearly two thirds of the rural children would like to attend schools for qualified workers. The results indicate that the town children of both qualified and unqualified workers, compared to the rural children, wish to continue their schooling in school with longer and educationally more demanding courses.

Study habits

These were investigated by means of a special questionnaire to be answered by pupils. The higher the number of points gained, the better their study habits.

7.6. The town children received the following mean scores:

Groups	M	SD	F-test	p
T-1	384.42	43.64	3.37	.05
T-2	380.82	43.32		
T-3	393.11	43.13		

There is very little support for the hypothesis. The children from small towns T-3 displayed significantly better study habits than their age-mates from small towns T-2, while the other differences, namely between M-1 and M-2 children and those between M-1 and M-3 children are not statistically significant. Thus, the differences between the groups are small which practically means that children from large and small towns have more or less equally developed study habits.

8.6. The two groups of rural children received the following mean scores on study habits:

Groups	M	SD	F-test	p
R-1	382.14	44.19	4.03	.05
R-2	368.49	42.76		

The hypothesis is confirmed. The children from semi-peasant areas received higher scores for stufy habits than their age-mates from peasant areas. The differences, however, even though statistically significant, are small.

9.6.(a) The children of unqualified town workers and the rural children do not differ significantly in the scores received for study habits. The mean results are:

Groups	M	SD	F-test	p
U	372.60	45.32	.36	n.s.
R	374.67	43.97		

The hypothesis is rejected as the two groups of children received practically the same scores.

9.6.(b) There are, however, significant differences in this respect between the children of qualified town workers and the rural children. The mean scores are as follows:

Groups	M	SD	F-test	p
Q	384.21	41.39	4.24	.05
R	374.97	43.97		

Here, the hypothesis is confirmed. The children of qualified town workers have better study habits than the rural children but it should be noted at the same time that the differences are relatively small.

In conclusion it can be stated that there are only small, if any, differences between the urban and rural children in study habits. As it was established that they differ substantially in academic achievement in general, we assume that the reason for this discrepancy should be sought in other factors more than in study habits.

Style of learning

The pupils' style of learning was evaluated by their teachers. We were interested to find out whether the children learn with understanding, applying the learned material in solving similar problems and if they are critical in studying.

7.7. The children from large and small towns received the following mean scores:

Groups	M	SD	F-test	p
T-1	17.70	3.91	2.01	n.s.
T-2	18.15	4.14		
T-3	18.62	4.31		

The results do not support the hypothesis. There are no significant differences in style of learning between the children from large and small towns.

8.7. Nor do the R-1 and R-2 children differ significantly in this respect. Their results are as follows:

Groups	M	SD	F-test	p
R-1	16.85	4.27	1.43	n.s.
R-2	17.54	3.87		

The hypothesis is rejected. The children from semi-peasant and those from peasant areas received very much the same average scores.

9.7.(a) A comparison between the urban and rural children showed the following:

Groups	M	SD	F-test	p
U	17.00	4.12	.19	n.s.
R	17.20	4.09		

The hypothesis is rejected. The children of unqualified town workers received practically the same scores for style of learning as did the rural children.

9.7.(b) The children of qualified town workers and the rural children had the following mean results:

Groups	M	SD	F-test	p
Q	17.28	3.88	.09	n.s.
R	17.20	4.09		

The hypothesis is rejected again. The urban and rural teachers gave their pupils approximately the same scores.

According to the results there are no differences in style of learning between the urban and rural children. It is of course questionable whether these results can be taken at face value. It was evident earlier that the town children did considerably better both in achievement tests and the non-verbal intelligence test and therefore we expected to find that they would also have a better learning style which however, was not confirmed. We are inclined to believe that the rural teachers did not evaluate their pupils quite realistically; as in evaluating achievement in different school subjects they probably gave their pupils somewhat too favourable scores in style of learning as well.

Social Behavior

This variable was examined by means of a questionnaire that included five questions on social behabior. The frequency of this type of behavior was estimated by the teachers by means of a five-point rating scale where a higher numeral value stands for more suitable social behavior and vice versa.

7.8. The town teachers gave their pupils the following mean scores:

Groups	M	SD	F-test	p
T-1	19.82	3.30	3.48	.05
T-2	20.11	3.39		
T-3	20.79	3.36		

The hypothesis is confirmed. The children from large and small towns differ significantly in social behavior. According to the teachers, the children from small towns (particularly the T-3 children) are a little more sociable than those from large towns (T-1). The differences are statistically significant but from the educational standpoint they do not amount to much. On the whole, the children's social behavior was evaluated quite favourably.

7.9. At the same time we examined the children's social relations with their school-mates and the problems regarding their social role. This was done by means of a questionnaire that included 17 questions to be answered by the pupils. They reported on how much a certain problem occupies them, i.e. very much, to a certain extent, a little, not at all. A higher numeral value stands for greater concern in connection with social problems and vice versa.

The town children's mean results are as follows:

Groups	M	SD	F-test	p
T-1	20.42	11.20		
T-2	21.13	12.49	3.47	.05
T-3	23.85	11.40		

The hypothesis is confirmed as the children from large and small towns differ significantly in this respect. The children from small towns T-3 and T-2 are more concerned about their social relations with their school-mates and about their social role than the children from large towns. It can be concluded that the small town children require more popularity, understanding and co-operation within their social circles and are more concerned about being socially successful than the children from large towns.

8.8. The rural teachers gave their pupils the following mean scores for social behavior:

Groups	M	SD	F-test	p
R-1	20.25	3.38	.02	n.s.
R-2	20.32	3.36		

The hypothesis is rejected. The two groups of rural children do not differ significantly in this respect.

8.9. The rural children's answers about their social problems produced the following results:

Groups	M	SD	F-test	p
R-1	24.90	11.55	.68	n.s.
R-2	26.24	10.82		

The hypothesis is rejected again. The two groups of rural children are more or less equally concerned about social problems.

9.8.(a) The children of unqualified town workers and the rural children received the following mean scores for social behavior:

Groups	M	SD	F-test	p
U	19.34	3.45	6.90	.01
R	20.29	3.37		

The hypothesis is confirmed as the two groups differ significantly in this respect. The rural children have somewhat better social relations with their school-mates and are more eager to co-operate than the children of unqualified town workers. It should be noted, however, that the difference are rather small.

9.9.(a) The two groups' answers about social problems gave the following results:

Groups	M	SD	F-test	p
U	23.15	11.81	3.88	.05
R	25.56	11.22		

The children's reports also confirm the hypothesis. The rural children are more concerned about their social relations and their social role than the children of unqualified town workers. It can be concluded that the rural children require more popularity and co-operation and are also more concerned about being socially successful than the town children. It should be noted, however, that the differences are not very large.

9.8.(b) The children of qualified town workers and the rural children received the following scores for social behavior:

Groups	M	SD	F-test	p
Q	20.11	3.33	.21	n.s.
R	20.29	3.37		

Here, the hypothesis is rejected as the two groups do not differ significantly in the scores received for social behavir.

9.9.(b) The two groups gave the following answers about their social problems:

Groups	M	SD	F-test	p
Q	21.46	11.92	11.32	.001
R	25.56	11.22		

The hypothesis is confirmed as the two groups differ significantly in this respect. The results indicate that the rural children are more concerned about their social relations and social role than the children of qualified town workers. An elaborate analysis revealed that the rural children are more occupied with problems of social recognition among their fellows and in society in general than the town children are. They would, for instance, like to feel more ease at parties and other social events, would like to dance better and have more opportunities to perform in public. This indicates that rural children have fewer chances to take part in various social activities and obtain social recognition than their urban age-mates.

In conclusion it should be pointed out again that both town and rural teachers gave a rather favourable evaluation of their pupils' social behavior. In 74% of the town children suitable social behavior is observed very often or always, in 19% sometimes and in 7% very rarely or never. The picture is similar for the rural children. In 76% of them suitable social behavior is observed very often or always, in 18% sometimes and in 6% very rarely or never.

The pupils' answers about their social relations and social role indicate certain differences between the urban and rural children but these differences are relatively small. 58% of the children of qualified and unqualified town workers are not at all or only slightly concerned about their social relations and social role, 25% of them are quite preoccupied these problems, while the remaining 17% find them very disturbing. Similarly, 52% of the rural children are not at all or only slightly concerned about their social relations and social role, 29% of them are quite preoccupied with these problems, and 19% find them very disturbing.

Aggressive Behavior

The children's aggressive behavior was reported on by their teachers. The questionnaire included three questions on aggression and a five-point rating scale was used where a higher numerical value stands for more frequent and a lower numerical value for less frequent aggressive behavior.

7.10. The town teachers presented the following evaluation of their pupils aggressive behavior:

Groups	M	SD	F-test	p
T-1	13.70	1.84		
T-2	13.97	1.75	1.47	n.s.
T-3	13.96	1.46		

The hypothesis is rejected as the children from large and small towns do not differ significantly in aggressive behavior. They are very much the same in bullying, in fighting with school-mates and destroying their own or somebody else's property. There is, however, a significant difference in variability which is slightly greater in T-1 children than in T-3 children. On the whole, this kind of behavior is only rarely observed.

8.10. The children from the two rural areas have the following results:

Groups	M	SD	F-test	p
R-1	13.76	1.62	.32	n.s.
R-2	13.86	1.61		

The hypothesis is rejected. The children from semi-peasant and those from peasant areas do not differ significantly in this respect. In the rural children this kind of behavior is also quite rare.

9.10.(a) A comparison between the children of unqualified town workers and the rural children shows the following:

Groups	M	SD	F-test	p
U	13.82	1.77	.11	n.s.
R	13.81	1.62		

The hypothesis is not confirmed. The two groups do not differ significantly in aggressive behavior.

9.10.(b) Similarly, there are no significant differences between the children of qualified town workers and the rural children. The mean results are:

Groups	M	SD	F-test	p
Q	13.85	1.69	.15	n.s.
R	13.81	1.62		

The hypothesis is rejected again. The results indicate that in the two groups this kind of behavior is equally rarely observed.

An elaborate analysis revealed that in both urban and rural children aggressive behavior is in general very rare. In 90% of the children of qualified and unqualified town workers aggressive behavior is observed very rarely or never, in 9% sometimes and in 1% very often or always. The picture is practically the same for the rural children. In 91% of them aggressive behavior is observed very rarely of never, in 8% sometimes and in 1% very often or always.

Restless behavior

The questionnaire included five questions on various forms of restless behavior usually observed in pupils. The teachers made their evaluation by means of a five-point rating scale where a higher numeral value stands for less frequent and a lower numerical value for more frequent restless behavior.

7.11. The town teachers evaluated their pupils as follows:

Groups	M	SD	F-test	p
T-1	19.85	3.40		
T-2	20.33	3.62	3.43	.05
T-3	20.84	3.14		

The hypothesis is confirmed as the town children differ significantly in this respect. According to the teachers, the most restless are the T-1 children, followed by T-2 and T-3 children respectively.

8.11. The rural children received the following mean scores:

Groups	M	SD	F-test	p
R-1	21.02	3.09	.19	n.s.
R-2	20.85	3.41		

The hypothesis is rejected. Restless behavior is equally frequent in the two groups of rural children.

9.11.(a) Nor are there any significant differences between the children of unqualified town workers and the rural children. The mean scores are as follows:

Groups	M	SD	F-test	p
U	20.41	3.34	2.05	n.s.
R	20.93	3.26		

The hypothesis is not confirmed. Restless behavior is equally frequent in these two groups as well.

9.11.(b) There are, however, significant differences in this respect between the children of qualified town workers and the rural children. The mean scores are as follows:

Groups	M	SD	F-test	p
Q	20.12	3.46	5.72	.05
R	20.93	3.26		

The hypothesis is confirmed. The results indicate that the rural children are not as restless in school as the children of qualified town workers are but these differences are not large. No ready explanation can be offered for this result.

In conclusion it can be stated that restless behavior in school is not very common either in urban or in rural children. In 70% of the town children of both qualified and unqualified workers restless behavior is observed very rarely or never, in 23% sometimes and in 7% very often or always. The picture is similar for rural children. In 76% of them restless behavior in school is observed very rarely or never, in 18% sometimes and in 6% very often or always.

Anxiety symptoms

Anxiety in pupils was estimated by the teachers by means of a questionnaire that included five questions on these symptoms. A five-point rating scale was used where a higher numeral value stands for a less frequent and a lower numerical value for a more frequent occurrence of anxiety symptoms in pupils.

7.12. The town children's results are as follows:

Groups	M	SD	F-test	p
T-1	17.28	3.49		
T-2	18.01	3.54	3.53	.05
T-3	18.30	3.57		

The hypothesis is confirmed as the children from large and small towns differ significantly in this respect. Anxiety symptoms are less frequent in the children from small towns T-2 and T-3 who are a little less worried and anxious in school than the children from large towns. The differences, however, are not large.

8.12. The rural children's results are as follows:

Groups	M	SD	F-test	p
R-1	17.37	3.54	1.10	n.s.
R-2	17.88	3.56		

The hypothesis is rejected. The two country groups do not differ significantly in the frequency of anxiety symptoms.

9.12.(a) A comparison between the children of unqualified town workers and the rural children showed the following:

Groups	M	SD	F-test	p
U	17.08	3.76	2.38	n.s.
R	17.63	3.56		

The hypothesis is rejected. The two groups do not differ significantly in the frequency of anxiety symptoms.

9.12.(b) Nor are there any significant differences in this respect between the children of qualified town workers and the rural children. The teachers presented the following evaluation:

Groups	M	SD	F-test	p
Q	17.48	3.36	.19	n.s.
R	17.63	3.56		

The hypothesis is not confirmed. The two groups do not differ significantly in the frequency of anxiety symptoms.

In conclusion it can be stated that school anxiety is a rather frequent phenomenon in both urban and rural children. In 47% of the children of qualified and unqualified town workers school anxiety is observed very rarely or never, in 37% sometimes and in 16% very often or always.

The rural children's results are very much the same. In 52% of them school anxiety is observed very rarely or never, in 32% sometimes and in 16% very often or always.

The teachers' reports clearly indicate that there is a lot of anxiety in the classroom. In the majority of pupils anxiety is rarely observed while in a number of them it is a rather frequent phenomenon which probably also affects their academic achievement.

Neurotic symptoms

We were also interested in the frequency of neurotic symptoms observed in pupils. The questionnaire included five questions on these symptoms. A five-point rating scale was used where a higher numerical value stands for a less frequent and a lower numeral value for a more frequent occurrence of neurotic symptoms.

7.13. The town children's results are as follows:

Groups	M	SD	F-test	p
T-1	23.81	1.93		
T-2	24.13	1.39	1.63	n.s.
T-3	24.09	1.70		

The results obtained do not confirm the hypothesis. The children from large and small towns do not differ in neurotic symptoms which cover nail biting, thumb sucking, ticks etc. There is, however, a significant difference in variability. T-1 and T-3 children displayed greater variability in this respect than did T-2 children.

8.13. Nor are there any significant differences between the two groups of rural children. Their mean results are as follows:

Groups	M	SD	F-test	p
R-1	24.08	1.30	2.16	n.s.
R-2	24.33	1.16		

The hypothesis is not confirmed. Neurotic symptoms are more or less equally frequent in the two groups.

9.13.(a) A comparison between the children of unqualified town workers and the rural children showed the fol-fowing:

Groups	M	SD	F-test	p
U	24.15	1.62	.13	n.s.
R	24.21	1.24		

The hypothesis is rejected as there are no significant differences between the two groups in the frequency of neurotic symptoms. There is, however, a difference in variability which is greater in the urban than in the rural children.

9.13.(b) Nor do the children of qualified town workers and the rural children differ significantly in this respect. The mean results are:

Groups	M	SD	F-test	p
Q	23.92	1.67	3.54	n.s.
R	24.21	1.24		

The hypothesis is rejected again. The two groups of children do not differ significantly in the frequency of neurotic symptoms.

The results indicate that neurotic symptoms occur very rarely in both urban and rural children. An elaborate analysis revealed that in 95% of the children of qualified and unqualified town workers neurotic symptoms are observed very rarely or never, in 4% sometimes and only in 1% very often or always. Practically the same is true of the rural children. In 96% of these, neurotic symptoms are observed very rarely or never, in 3% sometimes and in 1% very often or always.

Psychosomatic troubles

There were ten questions on the children's concern about their psychosomatic troubles. The children reported how much they are disturbed because of a certain problem, i.e. very much, to a certain extent, a little or not at all. The higher the numerical value, the greater the children's concern about their psychosomatic troubles, and vice versa.

7.14. The town children had the following mean results:

Groups	M	SD	F-test	p
T-1	6.96	5.94		
T-2	7.20	5.86	.25	n.s.
T-3	7.59	6.07		

The hypothesis is rejected as the town children do not differ significantly in their concern about their psychosomatic troubles. The children expressed only a slight concern, if any, about not feeling well, quick exhaustion, poor sleep, headaches, lack of appetite and dizziness.

8.14. Nor are there any significant differences in this respect between the children from the two rural areas. Their mean results are as follows:

Groups	M	SD	F-test	p
R-1	8.92	6.26	2.00	n.s.
R-2	10.06	6.10		

The hypothesis is rejected. The children from semi-peasant and those from peasant areas are more of less equally concerned about their psychosomatic troubles.

9.14.(a) A comparison between the children of unqualified town workers and the rural children showed the following:

Groups	M	SD	F-test	p
U	7.97	5.65	5.32	.05
R	9.50	6.21		

The hypothesis is confirmed as the two groups of children differ significantly in this respect. The rural children are rather more concerned about their psychosomatic troubles than the children of unqualified town workers.

9.14.(b) In the same way there are significant differences between the children of qualified town workers and the rural children. The mean results are as follows:

Groups	M	SD	F-test	p
Q	7.01	6.27	13.98	.001
R	9.50	6.21		

The hypothesis is confirmed again. The rural children are a lot more concerned about their psychosomatic troubles than the children of qualified town workers.

In conclusion it can be stated that the rural children are in general a lot more concerned about their psychosomatic troubles than the urban children. 83% of the urban children bother very little or not at all about this kind of problem, 11% are quite concerned while 6% of them are very concerned about their psychosomatic troubles.

The rural children's figures are less encouraging. 76% of them are not bothered about this kind of problem, 16% are quite concerned and 8% are very concerned about their psychosomatic troubles.

DISCUSSION OF RESULTS

1. *Differences between children from large and small towns*

A general conclusion drawn from this research in that children from large and small towns do not differ, or else very little, in their knowledge of the basic school subjects. T-1 children read better than T-2 children; the mean difference is .29 SD. T-1 children also excel over T-2 and T-3 children in linguistic subjects. The mean difference between T-1 and T-3 children in the Slovene language achievement test is .25 SD and in the English language achievement test .34 SD. The same differences in the knowledge of these two subjects can be found between T-1 and T-2 children. It should be underlined, however, that the differences among urban children are rather small and do not present a hindrance in their further schooling. This finding is supported by the school marks in these subjects - at the end of the school year, children from different size towns received approximately the same marks in English and Slovene. At the same time these groups of children do not differ significantly neither in Achievement tests nor in the school marks in Mathematics, History and Biology. Thus it is evident that children from small and large towns at the end of their compulsory schooling differ very little or not at all.

Our research also indicates that children from large and small towns have more or less equally developed intellectual abilities. A Serbian study, on the other hand, indicated that children from large towns did notably better in intelligence tests than children from small towns (Ivić et al., 1976). It could therefore be concluded from our results that differences in the urbanization of Slovene towns are not as large or else that they are not felt as strongly since we have uniform curriculum elementary schools.

The children's occupational and educational aspirations provide a similar picture. Children from different size towns do not differ essentially in this respect. Although larger and culturally more developed towns provide better possibilities for further education and professional training, this did not figure in the children's occupational and educational aspirations. It seems that the size and location of a town have no significant effect on a child's occupational and educational aspirations at the end of the compulsory elementary school.

Children from large and small towns have more or less equally developed study habits and do not differ much in their style of learning. Thus it can be concluded that the size and degree of urbanization of the town in which the child lives does not affect his style of learning and study habits to any considerable extent.

The research also indicates that children from the smallest towns T-3 are more sociable in relations with their mates, display less restless behavior and less anxiety than children from large towns T-1. The mean differences between these two groups were the following: social behavior .29 SD, restless behavior .30 SD and anxiety .29 SD. These differences are small and they do not have practical effect on the children's further schooling and personality development.

Children from large and small towns do not differ very much in their concern about sociability. Children from small towns T-3 are a little more concerned than T-1 and T-2 children. The mean difference between T-1 and T-3 children is .29 SD; between T-2 and T-3 children it is .23 SD. This indicates that children from small towns would like to be socially more successful while their age-mates from larger towns are not so concerned about this question; they probably have a greater number and variety of possibilities for social activity than children from small towns.

Thus, the results of this research indicated that the hypotheses that presupposed certain differences between children from large and small towns were generally not confirmed. The few exceptions produced very small differences. Here it should be stressed again that the three samples of urban children were selected with regard to the socio-economic status of the parents. In this way, the results were affected by the different level of urbanization and function of towns, and not by the SES of the family.

Thus it can be concluded that the size and function of towns and their demo-geographic structure have practically the same effect on children's academic achievement, their intellectual development, occupational and educational aspirations and other personality characteristics.

We also examined some school variables that could possibly affect the different academic achievement of children from large and small towns. We found out that 8th grade teachers from large towns (T-1) have a better education; a greater number of them have university or junior college education than it the case with small town teachers. Also, all teachers in large towns have an adequate education for the subject they teach; in out sample there was an exception in Mathematics and Physics. In small towns there is a lower percentage of teachers with adequate education. At the same time it became evident that large town teachers have on average a longer period of teaching behind them.

It is interesting, though, that these differences in professional qualification and period of teaching did not have much influence on the pupils' knowledge, which was evident both from the school marks and the achievement test results. It seems that these differences among town teachers are not so large as to bring about any considerable changes in the pupils. Thus it can be stated that schools in small and large towns are approximately equally effective and that different levels of urbanization of towns and their demo-geographic structure do not have different effects on the children's academic achievement and their personality development.

2. Differences between children from peasant and semi-peasant areas

This sample of pupils was taken from two rural areas. The first,where 40%-75% of the inhabitants were peasants was called a semi-peasant area (R-1) while the second, where more than 75% population were peasants, was called a peasant area (R-2). Half the parents of each group of children made their living exclusively by farming while the parents of the other half are also peasants but one of the parents has a regular job out side the farm (usually the father). The children from both groups are thus equal with regard to socio-economic status.

The pupils from semi-peasant areas had somewhat better scores in reading, Mathematics, History and Biology achievement tests. The mean differences were the following: .29 SD in Reading achievement, .32 SD in Mathematics, .44 SD in History and .33 SD in Biology. The differences are relatively small except for History where they are moderate. The two groups of children received approximately the same scores in the Slovene and English language achievement tests. It is interesting that these two groups do not differ in either school marks in these subjects or in Grade point average, with one exception in Mathematics where children from peasant areas have higher marks. Thus it can be stated that differences between these two groups are relatively small and therefore they probably do not have any considerable practical effects.

It is interesting that these two groups do not differ in intellectual abilities and style of learning. This is one of the reasons why no substantial differences in academic achievement were found between them.

Differences did emerge, however, in occupational aspirations and expectations. Children from semi-peasant areas would like to have a little more demanding and respectable occupations than their age-mates from peasant areas. The mean difference is .38 SD in occupational aspirations and .47 SD in occupational expectations.

It is interesting, on the other hand, that the two groups do not differ in educational aspirations. This indicates that children from semi-peasant areas would in general like to have more demanding occupations but they either do not have the opportunity or else they are not motivated enough and convinced that they could obtain the education required.

There were no substantial differences between the two groups in social, restless and aggressive behavior, anxiety symptoms and neurotic symptoms. It was only in their study habits that children from semi-peasant areas excel; the mean difference is .28 SD. Yet the differences between them are practically small. The results indicate that the majority of hypotheses that presumed differences between children from the two rural areas were not confirmed. In the variables where differences did emerge they were only small and therefore we believe that they do not have any considerable effects.

On the basis of the results of 8th grade pupils it can be concluded that the rural environment varies with regard to the ratio of peasant inhabitants yet it is quite homogeneous in its social and cultural effects. Its people are also rather similar in their way of life. These conditions have an influence on their children who, on the whole, do not differ essentially with regard to academic achievement, intellectual development and other personality characteristics.

3. *Differences between urban and rural children*

It has been established that children from large and small towns differ very little, or not at all, in the variables examined. Therefore we pooled these groups and treated them together as urban children. However, only the children of qualified and unqualified town workers were included in this group since their parents are rather similar to rural parents with regard to education and work. In our opinion it would not be justifiable to include professional town workers' children in this comparison as the differences obtained would thus be much more a result of the effects of SES than of urban or rural environment. The effects of the environment is the central point in our interpretation in this chapter.

It has also been established that children from semi-peasant and peasant areas in general do not differ in the variables examined or else these differences are so small that they can be neglected. Therefore these two groups of children (R-1 and R-2) were pooled and treated as rural children (R).

a) Differences between unqualified town workers' children and rural children

Achievement test results indicated that unqualified town workers' children have a quantitatively and qualitatively better knowledge than rural children. This was the case with all the subjects where knowledge was tested with achievement tests. The mean differences between the two groups are the following: Slovene language .48 SD, Mathematics .87 SD, English language .49 SD, History .62 SD and Biology .76 SD.

The differences are moderate in the linguistic subjects and in History while those in Mathematics and Biology are rather large. This means that rural children's knowledge is much poorer than that of their urban age-mates.

The school marks at the end of the school year give a completely different picture. Rural children have the same or significantly higher mean marks in individual subjects than unqualified town workers' children. The mean difference in the Grade point average in the eight basic subjects is .26 SD. The picture that the school marks give is quite contradictory with that produced by achievement test results which indicated that rural children have considerably poorer knowledge in comparison with this group of urban children. This indicates that rural teachers use milder criteria for marking their pupils' performance than their town colleagues.

Teachers classify pupils into more and less successful within the class and school and adapt their marking criteria to the capability of children in the area. This means that a pupil will receive for the same knowledge a lower mark in a town school and a higher one in a village school. Therefore school marks do not reflect the knowledge of urban and rural children realistically.

The largest differences between these two groups were found in reading achievement. The mean difference is 1.01 SD. It is obvious that at the end of their compulsory education rural children do much worse in this respect than urban children. The gap is not smaller than that found in 4th grade pupils - it is even a little larger. Rural children have a poorer vocabulary, they read more slowly and have a poorer reading comprehension. They have fewer opportunities to improve their linguistic knowledge and vocabulary than urban children. Therefore rural children also learn more slowly in other subjects.

The poorer social and cultural development of the rural environment is also reflected in children's intellectual abilities. Rural children obtained considerably lower scores in a non-verbal intelligence test than did unqualified workers' children. The mean difference is .66 SD, which is comparatively large. Because of their less developed intellectual abilities rural children generally achieve poorer success in school and outside it and have thus fewer chances for further schooling in colleges and universities. This is not true of all, but of the majority of rural children.

Rural children also have lower occupational aspirations, occupational expectations and educational aspirations than unqualified town workers' children. The mean differences between these two groups are the following: occupational aspirations .39 SD, occupational expectations .46 SD and educational aspirations .42 SD. These differences are moderate. Although the parents of these children are rather similar with regard to education and work, their children differ rather a lot in occupational and educational aspirations. Here it can be concluded that the urban environment in interaction with the family provided a better stimulation for the development of the children's aspirations than the rural environment. At the same time it also provides actual chances for the fulfilment of these aspirations as there is a greater choice of schools and occupations than in the country. Rural children are somewhat deprived in this respect which is doubtless one of the factors that hinder the development of their occupational ambitions and aspirations to further schooling. Therefore many a rural child does not continue schooling even if he has adequate intellectual abilities and the necessary knowledge.

It is interesting that rural children have approximately the same study habits as unqualified town workers' children. As it was found that the two groups differ substantially in both the quantity and quality of their knowledge it was expected that town children would also have better study habits which was, however, not confirmed. Thus, if there are no significant differences between these two groups in study habits, the reasons for the better academic achievement of urban children should be sought in other factors. Naither were there any significant differences between these two groups of children in their style of learning. This was quite surprising as we found that the style of learning correlated relatively highly with academic achievement (see page 399-400). Urban children are more successful in school than rural children, therefore we expected that they would excel in this respect as well. It is our opinion that rural teachers did not give a realistic evaluation of their pupils' style of learning. As was the case with the school marks, the evaluation was probably too favourable.

It is interesting that rural children obtained a little higher score in sociability than unqualified town workers' children. The mean difference is .27 SD. There is more warmth and less emotional alienation in the social relations of rural children because rural families are more similar with regard to SES than urban families. It should be pointed out, however, that these differences are rather small and therefore a reliable conclusion about a more promising social upbringing of rural children cannot be made.

Concern about social relations was another variable examined. It was found that rural children were a little more concerned about their social relations and social role than unqualified town workers' children. The mean difference between these two groups is .21 SD. This difference is small, therefore no reliable conclusions can be drawn.

It was also found that rural children are a little more concerned about various psychosomatic troubles than unqualified town workers' children. The mean difference is .25 SD. It is surprising that the difference is small; a larger one was expected. Life in the country demands more effort from children; they do their share of physical work, their standard of living is somewhat lower and they attend medical examinations less frequently.

It is also interesting that no significant differences in other personality characteristics, i.e. aggression, restlessness, anxiety and neurotic symptoms, were found between urban and rural children of unqualified workers.

b) Differences between children of qualified town workers and rural children

As stated earlier, the rural children have a considerably weaker knowledge of the basic school subjects than children of unqualified town workers. The differences between the rural children and qualified town workers' children are larger still: .55 SD in the Slovene language achievement test, .95 SD in Mathematics, .68 SD in English, .84 SD in History and .94 SD in Biology. The differences in all the subjects are very large except for Slovene language where they are moderate.Rural children generally do worse in the subjects mentioned then this group of urban children. In most rural children this shortcoming is so large as to hinder them substantially in further schooling and in professional training for more demanding occupations.

The school marks provide a different picture. The rural children have exactly the same mean school marks as their urban age-mates although those two groups differ very much in achievement test scores. These results indicate again that rural teachers use milder criteria for marking their pupils' performance than their town colleagues. This finding is valid for all the subjects reviewed in our research.

Consequently it can be stated that school marks do not reflect urban and rural children's academic achievement faithfully.

The largest difference was again found in reading achievement. The mean difference between two groups is 1.15 SD. From the educational point of view, these differences are very large. Therefore rural children do worse particularly in those subjects where reading and comprehension of the text play an important role. At the end of compulsory schooling, that is in the 8^{th} grade, the rural children's shortcomings in reading achievement are still as large as those found in the same SES groups of 4^{th} grade pupils. The negative effects of a rural environment on the children's linguistic development can certainly not be entirely eliminated by schooling but more efforts could be made by the schools to improve this state of affairs.

The negative effects of a rural environment are also manifested in the rural children's weaker intellectual development. The mean difference between them and the children of qualified town workers in the non-verbal intelligence test was .84 SD. This difference is large and is the same as that found in 4^{th} grade children. This indicates that regular school education cannot diminish the above - mentioned intellectual shortcomings in the majority of rural children. Since intellectual abilities are one of the primary factors in children's academic achievement, rural children generally have a weaker knowledge than their urban age-mates and of course fewer chances for obtaining demanding occupations.

Another weakness of rural children is their low occupational and educational aspirations. The mean difference between rural children and this group of urban children is .68 SD in occupational aspirations, .81 SD in occupational expectations and .84 SD in educational aspirations. These differences are rather large and practically the same as those found in the same SES groups of 4th grade pupils. Generally speaking, rural children aspire to less demanding occupations than qualified town workers' children. It is interesting, however, that rural children aspire to job levels above their fathers'. They hope to rise on the occupational scale by more than one point. The majority of these children (about two-thirds) wish to become qualified workers. Only one third of them wish to obtain secondary or college education. It is questionable, however, if they can manage it, considering their poorer knowledge and intelligence.

Rural children have weaker study habits than children of qualified town workers. The mean difference between these two groups is .22 SD, which is very small. Study habits are obviously not the factor that causes the large differences in academic achievement between these two groups.

It was only to be expected that this group of urban children who have greater knowledge and more developed intellectual abilities, would also have a better style of learning than their rural age-mates. The results, however, indicated that there are no significant differences between these two groups in this respect. Here again it is questionable whether the rural teachers evaluated their pupils' style of learning quite realistically. As they marked their pupils' knowledge less strictly than did urban teachers we assumed that they also gave too favourable a picture of their pupils' style of learning.

As to other personality characteristics, significant differences between these two groups were found only in concern about social relations and psychosomatic troubles. Rural children are more concerned with problems connected with social relations and their own social role. They would like to be socially more successful and have more opportunities for social activities. The mean difference between these two groups is .35 SD which is not large yet it reflects rural children's aspirations towards a greater social affirmation.

Rural children are also more concerned about their psychosomatic troubles; the mean difference is .39 SD. They more often complain about headaches, not feeling well, poor sleep and quick tiredness. As mentioned earlier, the reason for these complaints should be sought in rural children's greater share of physical work and lower standard of living.

It is interesting that these two groups do not differ significantly in social behavior, aggression, anxiety and neurotic symptoms. Some differences between them were found only in the case of restlessness. Urban children's behavior is a little more restless; the mean difference was .24 SD. Thise differences are very small and have no practical effects.

* * *

In conclusion it can be stated that the children of unqualified and qualified town workers have a greater and better knowledge of the basic school subjects than their rural age--mates. The largest differences between urban and rural children were found in reading achievement. Rural children have a poorer vocabulary and reading comprehension. It is interesting, however, that the differences in the Slovene language achievement test are smaller. This test covered mainly syntax and grammar. If functional knowledge of the mother tongue had been tested, greater differences between urban and rural children would probably have been found.

At the end of the compulsory eight year schooling the differences in reading achievement are no smaller than those found in 4th grade pupils. This means that the social and cultural shortcomings of a rural environment do not figure only at the beginning but also at the end of elementary schooling. It seems that the rural child cannot quite compensate for his linguistic shortcomings since he constantly adopts syntactically and semantically poorer speech models from his environment. The urban environment is more stimulating in this respect. The urban child also has better chances for promoting and cultivating his linguistic knowledge which also helps him to understand and express more demanding and abstract ideas.

Large differences between urban and rural children were also found in Mathematics. Success in this subject depends on a developed capacity for abstract thinking and also on linguistic comprehension. Knowledge of this subject plays a very important role in further schooling. Therefore rural children again have fewer chances for succeeding in more demanding occupations. Considerable differences appear in other subjects as well which can also hinder rural children in their vocational and personal progress.

Rural children have fewer chances for further schooling not only because of their poorer general knowledge but also because of their less developed intellectual abilities. Rural children are in a much more problematic position in this respect. The differences are practically the same as those found in 4th grade pupils. This indicates that school and its educational programmes does not manage to diminish the shortcomings in the intellectual development of rural children. It should be taken into consideration, however, that after the age of 10, the chances for modifying intelligence are relatively small compared with those before this age. But one of the reasons why such changes do not take place is to be sought in the rural environment which is not stimulating enough.

The rural children are also hindered from following a more demanding professional career by their comparatively low occupational and educational aspirations. Most rural children wish to become qualified workers, others would like to continue schooling in secondary schools, and only a small number of the latter would like to go to university. It is also disturbing that only two percent of all the rural children included in our research project would like to be farmers. It seems that they understand the difficulties of this occupation and are not very satisfied with it; at the same time they are offered good jobs outside farming which means a better standard of living. It is interesting, however, that in personality characteristics, urban and rural children differ very little or not at all. Rural children are slightly more concerned about their social relations and social role problems than their urban age-mates. It has been stressed that rural children have fewer chances for social activity while at the same time they have a greater share of physical and household work and therefore they expressed a greater need for social affirmation than urban children. They are also more concerned about various psychosomatic troubles. They live in less favourable conditions, do more physical work and attend medical service less frequently than urban children.

We believe that the differences found in the comparison of urban and rural children are to a large extent a consegu-ence of the effects of differently developed environments. The families in which these children live differ in their cultural level and way of life. Among other things we found that parents of urban children have many more TV sets than parents of rural children. 97% of qualified town workers' families, 86% of unqualified town workers' families and only 34% of rural families own a TV set. 65% of qualified town workers' families, 61% of unqualified town workers' families and only about 30% of rural families receive a daily paper.

59% of qualified town workers' families, 27% of unqualified town workers' families and 13% of rural families own a car. Every family in town and country owns a radio. Here it can be concluded that rural children are rather deprived in this sense if compared to urban children.

Urban children also have more newspapers and magazines at their disposal, and more time for reading and watching TV. Thus they have more sample opportunities for acquiring general and cultural knowledge, which has multiple effects on personality development.

The differences between urban and rural are also reflected in the number of children in the family. Rural families in our sample have on average 3.15, unqualified town workers' families 2.72 and qualified town workers' families 2.26 children. Rural parents in general have more children than urban parents. Yet this does not mean that rural children are therefore less successful in school; the correlations between the number of children in the family and their academic achievement were negative but weak (r = -.03 to -.20).

We were also interested in rural and urban children's housing conditions. The Living space index was calculated for this purpose. The index indicates the ratio between the total number of rooms (kitchen included) and the number of family members. The average Living space index for rural families is .72, for unqualified town workers' families .74 and for qualified town workers' families = .84. The comparison indicates that rural families and town workers' families do not differ very much in this respect. Therefore the housing conditions are not one of those factors that could explain the great differences in the academic achievement of urban and rural children. The correlations between the housing index and the academic achievement of our children are very low, ranging from r = .00 to r = .21. The relationship between housing conditions and children's academic achievement is in general rather weak. There are, of course, exceptional cases where bad and unhealthy housing conditions can hinder a child in studying and making progress in school.

Our research also dealt with some school variables that could be objectively examined. We were particularly interested in the teachers' education and their teaching period. We found large differences between urban and rural teachers in this respect. The criterion for a suitable education was completed college or university education. The teachers who had not acquired this level of education or else had acquired a college or university degree but not on the subject they taught, were considered unsuitably qualified. The data indicated that town schools had a considerable advantage over rural schools in this respect. 82% of town teachers and 38% of country teachers who taught Slovene were adequately qualified, in English language the figures were 90% and 14%, in Mathematics 66% and 37%, in Physics 77% and 33%, in History 90% and 34%, in Geography 91% and 43%, in Biology 96% and 51% and in Chemistry 97% and 49%. The data clearly indicate that more than half the rural teachers do not have an adequate education for the subject they teach. These differences are very large.

The differences in the teaching period were smaller. Urban teachers have more experience in teaching and working with pupils; their average teaching period was about 15 years while the rural teachers' average was about 9 years. These differences probably cannot affect the educational results of the pupils since the majority of rural teachers have enough school experience.

The insufficient qualification of rural teacher's can affect the quality and effectiveness of their lessons to a certain extent; it is possible that this is one of the reasons why rural children have a poorer knowledge than their urban age-mates. It is our belief, however, that this can only be a minor factor determining the differences in the academic achievement of urban and rural children.

Apart from the teachers' qualifications, there are other important factors in children's academic achievement, for instance the conditions in which the educational process takes place. Rural schools are smaller than urban ones, but on the other hand they have fewer pupils. As mentioned earlier, there are 29 pupils on average in a class in urban schools and 24 pupils in a class in rural schools which menas that rural teachers can devote more time to individuals. A further advantage of rural schools are morning lessons. In towns, 18% of the schools still have lessons in two shifts; one week in the morning and one week in the afternoon. Rural schools are at a disadvantage, however, when it comes to cabinet (laboratory) lessons which are provided in only about half the rural schools with 1 - 2 cabinets on average. Nearly all urban schools, on the other hand, have cabinet lessons and on average 8 cabinets for teaching different subjects. Urban schools also have better provided libraries with an average of about 5000 books while rural school libraries have only about 1200 books on average. Obviously, urban schools have much better conditions for teaching subjects where special equipment and instruments for experimental work are required. These cabinets also have special collections, practical aids and other didactic instruments that can make possible a better understanding of the material studied.

We also checked the variables home/the school distance, absence from lessons and co-operation of parents with the school. Most rural children take a bus to school yet they still walk a lot more than their urban age-maters. They do about 2 km every day while urban children do about .7 km on average. It is our belief, however, that the somewhat longer journey to school does not hinder rural children in their studying.

It is interesting that more absenteeism was observed in the urban children; they were absent from lessons on average 33 hours per year, while the rural children's figures were 22 hours per year. This factor can obviously not explain the lower academic achievement of rural children.

There were no significant differences in the co-operation of urban and rural parents with school; they attended school meetings equally frequently. Thus, this factor could not affect the differences in the academic achievement of urban and rural children.

In conclusion it can be stated that the differences in the academic achievement of rural and urban children are determined mainly by intellectual and motivation factors in interaction with the level of social and cultural development of the environment and of the family. Rural children are rather deprived in this respect and it seems that the school, despite the nationally uniform programmes, cannot compensate for this deprivation. At this stage of schooling there appear large differences between urban and rural schools concerning the professional qualification of teachers and other conditions that figure considerably in the educational process. These factors can additionally enlarge the gap between urban and rural children.

DIFFERENCES BETWEEN CHILDREN WITH REGARD TO THE SOCIO-ECONOMIC STATUS OF THE FAMILY

The results of 8th grade pupils

In the following chapter we shall present the results of children from families with different socio-economic status. The town children were divided into three groups on the basis of the parents' education and occupation: group 1 - professional workers' children (P), group 2 - qualified workers' children (Q) and group 3 - unqualified workers' children (U). The formation of the groups with regard to socio-economic status (SES) is presented in detail in the sample description.

Our hypothesis was based on the assumption that children differ significantly with regard to SES. The higher the socio-economic status of the family the more successfull, the children would be expected to perform in school. They would have more developed intellectual abilities, higher occupational and educational aspirations, better study habits and style of learning, and would also differ in various personality characteristics.

READING ACHIEVEMENT

10.1. The results indicate that there are significant differences among town children with regard to SES. The mean results were:

Groups	M	SD	F-test	p
P	88.22	13.13		
Q	81.25	13.53	23.71	.001
U	78.01	14.34		

Differences with regard to SES also emerged in individual parts of the reading test which covered vocabulary, reading speed and reading comprehension.

Vocabulary

Groups	M	SD	F-test	p
P	34.91	3.17		
Q	32.90	4.15	21.11	.001
U	31.99	3.88		

Reading speed

Groups	M	SD	F-test	p
P	22.40	4.83		
Q	20.88	4.27	14.22	.001
U	19.94	3.84		

Reading comprehension

Groups	M	SD	F-test	p
P	30.91	6.77		
Q	27.47	6.95	18.90	.001
U	26.08	6.82		

The reading test results confirmed the hypothesis. Professional workers' children had a significantly larger vocabulary, they read faster and also displayed a better comprehension of the reading material than did the children of qualified workers, who, in turn, did better than unqualified workers' children. The difference between these two groups is statistically significant ($F = 4.26; p < .05$) yet from an educational point of view does not amount to much.

Considering their more developed reading abilities, professional workers' children have better chances for learning inside and outside school than do qualified and unqualified workers' children.

SLOVENE LANGUAGE ACHIEVEMENT

10.1. The results of the Slovene language achievement test which comprised 140 questions indicated significant differences among children with regard to SES. The mean results were as follows:

Groups	M	SD	F-test	p
P	95.77	13.61		
Q	86.38	15.80	26.11	.001
U	84.98	14.48		

The hypothesis, however, is not entirely confirmed. Professional workers' children displayed a significantly better command of Slovene than did the children of qualified and unqualified workers. The difference between the latter two groups, however, is not statistically significant ($F = .73$; n.s.). It is evident that due to their better linguistic ability, professional workers' children have better chances of learning other subjects than the children of qualified and unqualified workers.

The mean test results indicate that pupils generally have a fairly good knowledge of Slovene. Professional workers' children answered 69% of the questions correctly, qualified workers' children 62% and unqualified workers' children 61%.

10.2. The average school marks on the subject also confirmed the hypothesis. The teachers evaluated their pupils as follows:

Groups	M	SD	F-test	p
P	3.80	.94		
Q	3.16	.96	39.85	.001
U	2.91	.89		

The mean marks of the professional workers' children were the highest, significantly lower were those of qualified workers' children, and lower still were those of unqualified workers' children. The difference between the latter two groups in statistically significant but comparatively small ($F = 6.79$; $p < .01$). The school mark distribution was similar to that of the Slovene language achievement test.

MATHEMATICS ACHIEVEMENT

10.1. The results of the Mathematics achievement test which comprised 33 problems indicated significant differences between children with regard to SES. The mean results were as follows:

Groups	M	SD	F-test	p
P	16.49	5.57		
Q	13.17	5.29	24.06	.001
U	12.62	5.15		

The hypothesis, however, is not entirely confirmed. Professional workers' children had significantly higher scores than did the children of qualified and unqualified workers who did not differ significantly in this respect (F = .92; n.s.).

A detailed analysis revealed that the differences between the two groups were fairly small when it came to arithmetic computation and somewhat larger regarding comprehension of arithmetic concepts and applications.

At the same time it is evident that the test results were comparatively low. On the average, professional workers' children solved 50% of the problems, qualified workers' children 40% and unqualified workers' children only 38%. The questions remains whether these poor results were due to poor mathematical knowledge or rather to an excessively difficult test, for it is clear that many problems were quite difficult and were not solved correctly by the majority of pupils. It should be pointed out, however, that the test was made in accordance with the present educational program. It is possible, though, that the subject is too broad and demanding for the pupils to master, if we consider the number of lessons given on this subject.

10.2. The teachers' marks were also relatively low. The mean marks on the subject were as follows:

Groups	M	SD	F-test	p
P	3.62	.97	33.96	.001
Q	2.94	.94		
U	2.80	.91		

Here the hypothesis is not entirely confirmed. Professional worker' children received significantly higher marks than did the children of qualified and unqualified workers'. The difference between the latter two groups was small and statistically insignificant (F = 2.41; n.s.).

ENGLISH LANGUAGE ACHIEVEMENT

9.1. The results of the English language achievement test which comprised 65 questions also indicated significant differences among children with regard to SES. The mean scores were as follows:

Groups	M	SD	F-test	p
P	41.18	11.20	32.65	.001
Q	33.52	10.17		
U	31.42	10.49		

Again, the hypothesis is not entirely confirmed. Professional workers' children displayed a significantly more advanced linguistic knowledge of English than did the children of qualified and unqualified workers. Here again the difference between these two groups was small and statistically not significant (F = 2.35; n.s.).

The mean scores indicated that qualified and unqualified workers' children have a rather poor knowledge of English; the former answered 51% of the questions correctly and the latter only 48%. The figures of professional workers' children were higher, i.e. 64%. Here again we assume that the poor scores might be a result of a too demanding subject; for a better command of foreign languages the children would certainly need more time for studying and exercises.

10.2. The school marks for this subject were also comparatively low. The teachers evaluated their pupils' knowledge of English as follows:

Groups	M	SD	F-test	p
P	3.78	1.05		
Q	3.00	1.03	35.06	.001
U	2.88	.98		

The school marks did not confirm the hypothesis entirely. Professional workers' children received significantly higher marks than the children of qualified and unqualified workers, who do not differ significantly in this respect (F = 2.76; n.s.). The differences in the school marks were quite in accordance with the results of the English language achievement test.

HISTORY ACHIEVEMENT

10.1. The results of the History achievement test which comprised 53 questions also indicated significant differences between children with regard to SES. The mean scores were as follows:

Groups	M	SD	F-test	p
P	29.64	8.06		
Q	26.40	7.99	18.33	.001
U	24.25	8.00		

The hypothesis is confirmed as the professional workers' children did significantly better than the children of qualified and unqualified workers. The difference between the latter two groups was statistically significant ($F = 5.94$; $p < .05$).

The scores on the History achievement test were rather low; professional workers' children answered only 56% of the questions correctly, qualified workers' children 50% and unqualified workers' children not more than 46%. In our opinion, the low results can be explained by the fact that the test, carried our at the end of the school year, covered all the lessons given during the year, and it is probable that the children had forgotten a lot of them. The teachers usually based their exams on the lessons given during the semester just completed rather than on the entire year's lessons. This allowed the students to forget the material previously taught and could account for the low marks. At the same time it should be noted that adequate comprehension and evaluation of historical facts requires fairly well developed abstract tkinking and many pupils at this age may not be quite up to it. The questions which assumed such abilities had considerably fewer adequate answers than those which dealt with historical facts only.

10.2. The school marks did not confirm the hypothesis entirely. The teachers gave their pupils the following marks:

Groups	M	SD	F-test	p
P	4.15	.89		
Q	3.40	1.00	39.86	.001
U	3.25	.97		

Professional workers' children had the highest marks, significantly lower were those of qualified workers' children, and lower still were those of unqualified workers' children. However, the mean difference between the latter two groups was small and statistically not significant (F = 2.44; n.s.).

These results are not in accordance with the test results. The pupils' marks were comparatively high while their knowledge of history proved to be rather poor. Also, the school mark differences were larger than those indicated by the History achievement test.

BIOLOGY ACHIEVEMENT

10.1. The results of the Biology achievement test, which comprised 100 questions on this subject, also indicated significant differences between the children with regard to SES. The mean scores were as follows:

Groups	M	SD	F-test	p
P	58.28	15.29		
Q	51.65	10.30	20.12	.001
U	49.59	11.90		

The hypothesis is not entirely confirmed. Professional workers' children displayed a significantly better knowledge of Biology than did the children of qualified and unqualified workers, while the difference between the latter two groups was small and statistically insignificant (F = 2.76; n.s.). Significant differences emerged in variability. Professional workers' children displayed greater variability in their achievements than qualified and unqualified workers' children.

The results indicated that the children had not mastered this subject very well. Professional workers' children answered 58% of the questions correctly, qualified workers' children 52% and unqualified workers' children only 50%. The reasons for these poor results are probably the same as in the case of History. At the end of the school year the teachers do not check the pupils' knowledge systematically, which allows the lessons that were given earlier to be forgotten. Our test covered the lessons of the entire school year.

10.2. The school marks do not confirm the hypothesis entirely. The teachers gave their pupils the following mean marks:

Groups	M	SD	F-test	p
P	4.12	.90		
Q	3.40	1.00	40.12	.001
U	3.22	.92		

Professional workers' children received significantly higher mean marks than did the children of qualified and unqualified workers, while the latter two groups did not differ significantly in this respect (F = 3.14; n.s.).

Here again the average school marks were higher than the achievement test scores and the school mark differences between the groups were larger than those indicated by the test results.

GRADE POINT AVERAGE

10.2. An analysis of the Grade point average for each group also indicated significant differences between the groups. The results were as follows:

Groups	M	SD	F-test	p
P	3.90	.81		
Q	3.21	.85	50.70	.001
U	3.02	.80		

The hypothesis is confirmed entirely. Professional workers' children had the highest Grade point average, followed by qualified and unqualified workers' children respectively. The difference between the latter two groups was also significant (F = 5.39; $p < .05$).

INTELLECTUAL ABILITIES

10.3. The results of the Lorge-Thorndike intelligence test also indicated significant differences between children with regard to SES. The mean results were as follows:

Groups	M	SD	F-test	p
P	47.46	11.10		
Q	41.05	10.49	23.15	.001
U	39.14	12.80		

The hypothesis is not entirely confirmed. Professional workers' children had significantly higher developed intellectual abilities than qualified and unqualified workers' children; it is interesting, however, that the difference between the children of qualified and unqualified workers was small and statistically insignificant (F = 2.21; n.s.).

Considering their more developed intellectual abilities' professional workers' children have better chances for learning in school and elsewhere than do the children of qualified and unqualified workers.

OCCUPATIONAL ASPIRATIONS AND EXPECTATIONS

10.4. The children's occupational aspirations and expectations differed significantly with regard to SES. In the following presentation, lower numerical values stand for higher aspirations and vice versa. The mean results were as follows:

Groups	M	SD	F-test	p
P	1.82	1.04		
Q	2.86	1.24	69.08	.001
U	3.82	1.15		

The hypothesis is confirmed. The highest occupational aspirations were expressed by professional workers' children, significantly lower were those of qualified workers' children, and lower still were those of unqualified workers' children. The latter two groups also differed significantly in this respect (F = 9.26; p < .01). The results also indicate that there is a greater variability among qualified workers' children than in the other two SES groups.

This does not mean, however, that unqualified workers' children have low occupational aspirations. They aspire to jobs of higher level than that held by their fathers who were on the six-point scale assigned 5.56 points. Their children hope to rise by 2.28 points. A detailed analysis revealed that 27.2% of them wish to become professional workers with junior college or university education, 35.1% of them would like to be professional workers with secondary graduation at the very least, while 37.8% wish to become qualified workers and only .9% of them want a job as unqualified workers.

The occupational aspirations of qualified workers' children were also relatively high. In comparison with the occupations of their fathers who were on the six-point scale assigned 4.74 points, these children hope to rise by 1.88 points. 41.3% of them wish to become professional workers with junior college or university education, 29.8% would like to become professional workers with secondary graduation at the very least, while 28.1% want to be qualified workers and .8% of them want a job as unqualified workers.

The occupational aspirations of professional workers' children were also a little higher in comparison with the present occupations of their fathers who were on the six-point scale assigned 2.52 points. These children hope to rise by .68 points. A detailed analysis revealed that 81.6% of them wish to become professional workers with junior college or university education, 12.8% would like to become professional workers with secondary graduation, while only 5.6% wish to be qualified workers.

Occupational expectations, which indicate the career levels the children believe they are likely to attain, provided a similar picture. The mean scores were as follows:

Groups	M	SD	F-test	p
P	1.96	1.04		
Q	3.10	1.21	91.26	.001
U	3.58	1.07		

The hypothesis is confirmed. Professional workers' children had the highest occupational expectations, significantly lower were those of qualified workers' children and lower still were those of unqualified workers' children. The difference between the latter two groups was also significant (F = 13.83; p < .001). Here again, qualified workers' children display greater variability than the other two SES groups.

The results indicated that the children's occupational expectations were a little lower than their aspirations. It seems that many children are already aware that they might not quite be able to fulfil their occupational wishes and therefore the differences between the groups grew a little larger.

EDUCATIONAL ASPIRATIONS

10.5. Here again, significant differences were found among children with regard to SES. In the following presentation, lower numerical values stand for higher aspirations. The mean results were:

Groups	M	SD	F-test	p
P	1.68	.89		
Q	2.75	1.06	101.31	.001
U	3.20	.96		

The hypothesis is confirmed. The highest educational aspirations were displayed by professional workers' children, significantly lower were those of qualified workers' children and lower still were those of unqualified workers' children. The difference between the latter two groups was also significant (F = 15.32; p < .001). The results indicate that in qualified workers' children there is a greater variability than in the other two SES groups.

Professional workers' children display very high educational aspirations. 78.4% of them aspire to junior college or university graduation, 17.7% would like to obtain secondary education while only 3.9% wish to attend various schools for qualified workers.

Relatively high educational aspirations were expressed by qualified workers' children as well. 35.8% of them want to attend a junior college or university, 33.1% would like to have secondary education and 31.1% would like to attend schools for qualified workers.

The picture is different for unqualified workers' children. 21.4% of them aspire to junior college or university education, 31.7% would like to obtain secondary education while 46.9% want to attend schools for qualified workers.

STUDY HABITS

1Q6. In the case of study habits there were significant differences between children with regard to SES. The mean results were as follows:

Groups	M	SD	F-test	p
P	402.31	39.11		
Q	384.21	41.39	20.11	.001
U	372.60	45.32		

The hypothesis is confirmed. Professional workers' children had the best study habits, followed by qualified and unqualified workers' children respectively. The differences between the latter two groups were also significant (F = 7.35; p < .01). The results also indicate differences in variability which was greater in unqualified workers' children than in professional workers' children.

A detailed analysis revealed that the largest differences existed in the methods and techniques of learning (F = 14.21; p < .001), coping with problems in learning (F = 31.84; p < .001) and selfconfidence (F = 14.04; p < .001). The differences were smaller in homework schedules (F = 5.17; p < .01). Professional workers' children make use of more suitable methods and techniques, have fewer difficulties in studying and greater self-confidence than qualified and unqualified workers' children. The difference between the latter two groups was smaller. Qualified workers' children make use of more suitable methods and techniques and have fewer difficulties than unqualified workers' children, while in the homework schedules and self-confidence they did not differ significantly. Due to their better study habits, namely methods and techniques of learning, coping with problems, and greater self-confidence, professional workers' children have better chances for satisfactory academic achievement than do the children of qualified and unqualified workers.

STYLE OF LEARNING

10.7. We were also interested to find out whether or not the children differed in their style of learning. The mean results were as follows:

Groups	M	SD	F-test	p
P	20.17	3.67		
Q	17.28	3.88	32.09	.001
U	17.00	4.12		

The hypothesis is not entirely confirmed. Professional workers' children have, according to their teachers, a significantly better style of learning than qualified and unqualified workers' children; while the latter two groups do not differ significantly (F = .43; n.s.).

The results indicate that professional workers' children have a more sensible and critical approach to learning and are more effective in dealing with problems of learning than the children of qualified and unqualified workers. A more accomplished learning style enables them to acquire a better knowledge.

SOCIAL BEHAVIOR

10.8. The children's social behavior was evaluated by their teachers. The mean results with regard to SES were as follows:

Groups	M	SD	F-test	p
P	21.26	3.08		
Q	20.11	3.33	13.97	.001
U	19.34	3.45		

The hypothesis is confirmed as the groups differed significantly in this respect. Generally speaking, professional workers' children have better relations with schoolmates and are socially more active than the children of qualified workers who in turn do better than unqualified workers' children. The difference between the latter two groups is not large, but is, however, statistically significant (F = 4.27; p < .05).

A detailed analysis revealed that in 82% of professional workers' children suitable social behavior is observed very often or always' in 15% sometimes, and in only 3% very rarely or never.

The picture is somewhat different for qualified workers' children. In 77% of these, suitable social behavior is observed very often or always, in 18% sometimes, and in 5% very rarely or never. In 70% of unqualified workers' children, suitable social behavior is observed very often or always, in 20% sometimes, and in 10% very rarely or never. The percentage of asocial children is comparatively small; within the limits of 3% - 10%.

10.9. Questions about social role and social relations with school-mates were answered by the pupils themselves. In the following presentation higher numerical values stand for greater concern about these problems and vice versa. The mean results with regard to SES are:

Groups	M	SD	F-test	p
P	20.95	12.31		
Q	21.46	11.92	1.71	n.s.
U	23.15	11.81		

The hypothesis is rejected as the groups did not differ significantly in this respect. An elaborate analysis showed that 63% of professional workers' children were concerned only slightly or not at all, 20% to a certain degree and 17% weve very concerned. Qualified workers' children provided a similar picture: 60% of them showed little or no concern, 23% to a certain degree, and 17% were very concerned. 56% of unqualified workers' children showed little or no concern, 26% to a certain degree and 18% were very concerned about social problems.

AGGRESSIVE BEHAVIOR

10.10. Aggressive behavior in children was evaluated by their teachers. In the following presentation, a higher numerical value stands for less frequent aggressive behavior and vice versa. The mean results with regard to SES were:

Groups	M	SD	F-test	p
P	13.97	1.61		
Q	13.85	1.69	.32	n.s.
U	13.82	1.77		

The hypothesis is rejected as the groups did not differ significantly in this respect.

The results indicate that in 92% of professional workers' children aggressive behavior is observed very rarely or never, in 8% sometimes, and in only 1% very often or always. Qualified workers' children provided a very similar picture. In 89% of them, aggressive behavior is observed very rarely or never, in 10% sometimes and only in 1% very often or always. It is interesting that unqualified workers' children received nearly identical results - in 90% of them, aggressive behavior is observed very rarely or never, in 9% sometimes, and only in 1% verry often or always. It is evident that aggressive behavior in 14-year-olds from any SES group is very rare.

RESTLESS BEHAVIOR

10.11. Restless behavior in children was estimated by their teachers. In the following presentation, higher numerical values stand for less frequent restless behavior and vice versa. The mean results with regard to SES are:

Groups	M	SD	F-test	p
P	20.53	3.46	.68	n.s.
Q	20.12	3.41		
U	20.41	3.34		

The hypothesis is rejected as the groups did not differ significantly in this respect.

A detailed analysis showed that in 72% of professional workers' children restless behavior in school is observed very rarely or never, in 22% sometimes and in 6% very often or always. The picture is similar for qualified workers' children. In 68% of these children, restless behavior is observed very rarely or never, in 23% sometimes and in 9% very often or always. The results of unqualified workers' children were almost identical with those of professional workers' children. In 71% of them, restless behavior is observed very rarely or never, in 23% sometimes and in 6% very often or always. The percent of children with very frequent restless behavior can be considered comparatively small as it is found to be within the limits of 6% - 9%. It can be concluded that restless behavior is not related to the SES of the family.

ANXIETY SIMPTOMS

10.12. Anxiety in children was estimated by their teachers.

In the following presentation, higher numerical values stand for a more frequent occurrence of anxiety in school, and vice versa. The mean results with regard to SES are as follows:

Groups	M	SD	F-test	p
P	19.03	3.25	14.52	.001
Q	17.48	3.36		
U	17.08	3.76		

The hypothesis is not entirely confirmed. The least number of anxiety symptoms were observed in professional workers' children, significantly more in qualified and unqualified workers' children. The latter two groups, however, did not differ significantly in this respect (F = 1.03; n.s.).

A detailed analysis revealed that in 63% of professional workers' children anxiety is observed very rarely or never, in 30% sometimes and in 7% very often or always. The picture is different for qualified workers' children. In 50% of them, anxiety is observed very rarely or never, in 36% sometimes and in 14% very often or always. The results of unqualified workers' children were still slightly more disconcerting. In 44% of them, anxiety is observed very rarely or never, in 38% sometimes and in 18% very often or always. It is evident that school anxiety is a rather frequent phenomenon as it is observed occasionally in 30% - 38% of the children and very often in 7% - 18% of the children.

NEUROTIC SYMPTOMS

10.13. Neurotic symptoms in children were estimated by their teachers. In the following presentation, higher numerical values stand for less frequent occurrences of these symptoms and vice versa. The mean results with regard to SES were:

Groups	M	SD	F-test	p
P	23.97	1.76		
Q	23.92	1.67	.84	n.s.
U	24.15	1.62		

The hypothesis is rejected. The groups did not differ significantly in this respect.

A detailed analysis showed that in 95% of professional workers' children neurotic symptoms are observed very rarely or never, in 4% sometimes, and only in 1% very often or always. The results of qualified workers' children were exactly the same. In 96% of unqualified workers children neurotic symptoms are observed very rarely or never, in 3% sometimes, and in only 1% very often or always. In conclusion it can be stated that neurotic symptoms are very frequent in 1% of the children and occasionally observed in 3% - 4% of the children.

PSYCHOSOMATIC TROUBLES

10.14. The children also answered questions about their psychosomatic troubles. In the following presentation higher numerical values stand for greater concern regarding psychosomatic troubles and vice versa. The mean results with regard to SES were:

Groups	M	SD	F-test	p
P	6.86	5.89		
Q	7.01	6.27	1.46	n.s.
U	7.97	5.65		

The hypothesis is rejected as the groups did not differ significantly in this respect.

A detailed analysis revealed that 84% of professional workers' children showed little or no concern regarding psychosomatic troubles, 10% to a certain degree and 6% were very concerned. Qualified workers' children received exactly the same scores. 82% of unqualified workers' children showed little or no concern regarding psychosomatic troubles, 11% were concerned to a certain degree while 7% of these children were very concerned. It can be seen from the results that in general the number of children who are very concerned about their psychosomatic troubles is quite small, the percentage ranging between 6% - 7%.

DISCUSSION OF RESULTS

Here again, the same number of children of professional, qualified and unqualified workers were selected from each school. The pupils attended the same classes and were taught by the same teachers which means that they were subject to the same educational process. Thus the factors of the educational medium could not considerably affect the differences between SES groups in the variables examined.

The results indicated that pupils from different social and cultural environments achieve essentially different success in school. Professional workers' children excel over unqualified workers' children in reading achievement; the mean difference is as large as .68 SD. The mean difference between professional and qualified workers' children is .49 SD in favor of the former. Qualified workers' children are better readers than unqualified workers' children yet this difference is small; it amounts to .23 SD. The differences between SES groups are significant not only with regard to the total achievement scores but also in the individual parts of the test. The largest differences were found in vobaculary and reading comprehension while those in reading speed were smaller.

It can be concluded that the familial environment plays an important role in children's linguistic and reading achievement. It is interesting that the differences between SES groups are large even though the children attended uniform curriculum schools for eight years. This indicates that the school even in a longer period of time does not succeed in erasing the differences in linguistic and reading achievement. At lone,children of more educated parents have better chances to enlarge and improve their vocabulary and to express themselves more appropriately than children from qualified and unqualified workers' families. More educated parents encourage their children's linguistic development not only in the pre-school period and at the beginning of schooling, but also in the higher grades of elementary school. Therefore there are evident differences between SES groups not only in the lower grades but also at the end of the compulsory elementary schooling.

The differences between children from different familial environments are also reflected in achievement tests. The largest differences were again found between professional and unqualified workers' children where the former excel significantly. The mean differences between these two groups are as follows: Slovene language .72 SD, mathematics .68 SD, English language .82 SD, History .64 SD and Biology .60 SD. These differences are relatively large. Unqualified workers' children do worse particularly in the linguistic subjects, i.e. English and Slovene.

Professional workers' children also received higher scores in the basic subjects than qualified workers' children. The mean differences between these two groups are the following: Slovene language .61 SD, Mathematics .59 SD, English language .68 SD, History .40 SD and Biology .49 SD. Qualified workers' children do rather worse in linguistic subjects and in Mathematics. These differences can be explained by the effects of different familial environments. Professional workers' children live in a socially and culturally more favourable environment which gives them more stimulation and help in their academic activities. Therefore professional workers' children achieve better success in school than do children from the other two SES groups.

It is interesting that except for History, qualified and unqualified workers' children do not differ significantly in their achievement test scores. But even in this subject the mean difference is small (.27 SD). These two SES groups are quite close with regard to the social and cultural level of the familial environment and thus it is understandable why there were no larger differences between them in the knowledge of the basic school subjects.

It is surprising, however, that school mark differences between SES groups are larger than those in achievement test scores. The mean differences between the school marks of professional and unqualified workers' children as follows: .84 SD in Slovene language, .87 SD in Mathematics, .82 SD in English language, .88 in History and .90 SD in Biology.

In comparing professional and qualified workers' children it becomes evident that again the school mark differences are larger than those in achievement test results. The school mark differences were as follows: .64 SD in Slovene language, .75 SD in Mathematics, .74 SD in English language, .73 SD in History and .70 SD in Biology. This indicates that teachers are more severe in marking qualified and unqualified workers' children than professional workers' children. This happens because teachers do not take into account only their pupils' knowledge but also other characteristics which have been discussed in the interpretation of the 4th grade pupils' results.

Differences with regard to SES, similar to those in achievement test scores, were also found in the children's intellectual abilities. Professional and unqualified workers' children differ most in this respect, the former excelling considerably over the latter. The mean difference in the non-verbal intelligence test is .65 SD. There is also quite a large difference between professional and qualified workers' children, amounting to .57 SD. Obviously, professional workers' children have the most developed' intellectual abilities which is doubtless one of the major reasons for their better academic achievement in comparison with children from the other two SES groups.

No significant differences in intellectual abilities were found between qualified and unqualified workers' children. It is interesting, however, that the latter displayed greater variability; there are some more pupils with lower scores among them than among qualified workers' children. The small differences in intelligence can be explained if we consider that these two groups of children are quite similar with regard to SES.

Larger differences between these two groups emerged in occupational and educational aspirations. Professional workers' children aspire to both higher levels of education and occupation than unqualified workers' children. The mean difference between these two groups is 1.11 SD in occupational aspirations, 1.21 SD in occupational expectations and 1.28 SD in educational aspirations. There are also rather large differences between professional and qualified workers' children in this respect. The mean difference between these two groups is .82 SD in occupational aspirations, .90 SD in occupaional expectations and .96 SD in educational aspirations. The influence of SES is also observed in qualified and unqualified workers' children where the former excel significantly over the latter. The mean differences between these two groups are as follows: .28 SD in occupational aspirations, .41 SD in occupational expectations and .43 SD in educational aspirations.

The differences between SES groups are much larger in occupational and educational aspirations than in intelligence and academic achievement. This gap indicates that the great majority of professional workers' children (about 80%) wish to attend a junior college or university although some of them are below the mean of qualified and unqualified workers' children. On the other hand, a relatively small number of unqualified workers' children (about 20%) wish to continue schooling at a junior college or university and thus achieve a better occupational career. Considering their intellectual abilities (and knowledge), the number of these children could be larger.

The level of aspirations, which is higher in professional workers' children and lower in unqualified and qualified workers' children, depends very much on the familial environment. More educated parents direct their children with their opinions and conduct to more distant goals that require greater mental effort and persistence. Less educated parents, on the other hand, direct their children to closer goals that are easier to reach and quickly provide a means of earning a living. The major reason for such a different outlook of parents in our society is not so much the family budget but rather the appreciation of different values where attitudes towards education are also reflected.

Our results also indicate that the attitude towards education and occupational career changes. When the distance between the father's occupational level and the child's aspiration was measured, unqualified and qualified workers children showed a greater desire for occupational mobility than did professional workers' children. This was to be expected and it appears entirely realistic, since **professional workers' children** could **not move much further up the occupational scale;** but there is a great deal of room, in theory at least, for qualified and particularly unqualified workers' children to rise a considerable distance above their fathers' occupational status. The majority of these children aspire to more distant goals and thus to a better social position. Their aspirations, however, meet with obstacles both in school and outside it. Teachers are somewhat stricter in marking these children, which may discourage many of them from following their desired occupatioanl career. Society should therefore pay more attention to these children and give more support to their efforts. The school should also encourage both their interest in studying and their aspirations. It is generally known that occupational and educational aspirations are as important for children's academic achievement as is suitably developed intelligence.

Similar differences between SES groups were found in their style of learning and study habits as well. Professional workers' children have a better style of learning and better developed study habits than unqualified workers' children. The mean difference between these two groups is .75 SD in style of learning and .66 SD in study habits. These differences are large. There are also quite large differences between professional and qualified workers' children. The mean differences are .72 SD in style of learning and .44 SD in study habits. Qualified workers' children have better study habits than unqualified workers' children yet these differences are small (.27 SD). These two groups do not differ significantly in their style of learning.

Differences between SES groups can be explained if we consider that more educated parents direct their children in learning and help them to work out effective ways of tackling and solving problems. They also make sure that the children study regularly and encourage them to persevere until the work undertaken is completed. All this has an influence both on the improvement of study habits and on the development of the child's cognitive processes. Children of less educated parents are in this sense left to themselves since their parents cannot help them even if they want to.

Significant differences between SES groups emerged in social behavior as well. Professional workers' children relate better to their school mates and also co-operate better with them than do unqualified workers' children. The mean difference between these two groups is moderate, amounting to .56 SD. Professional workers' children also excel over qualified workers' children, the mean difference being .35 SD. The difference between qualified and unqualified workers' children is smaller, amounting to .23 SD.

The difference in social behavior between SES groups is to a large extent a consequence of the early and later socialization within the family. The children of more educated parents are taught more suitable forms of social behavior and provided with more feedback than children or less educated parents. Besides, identification with parents is stronger in the former than in the latter. The school medium also has an influence on the development of social behavior at this stage. The school makes an effort to iron out the differences between these children yet it evidently does not quite succeed in this undertaking. On account of their poorer academic achievement, many children of unqualified workers' have fewer chances for co-operation and social affirmation among their age-mates and are rather deprived in this respect. Thus it can be concluded that SES plays a very important role in the development of a child's social behavior.

Considering these differences in social behavior it was expected that SES groups would also differ in aggression yet no significant differences in this respect were found between them. In any SES group agressive behavior is observed in a very small number of children. It seems that during the years of schooling children learn to control their emotions to quite a large extent and seek more acceptable forms of reacting in various problematic situations.

There are considerable differences between SES groups in anxiety symptoms. Unqualified and qualified workers' children display more of these than do professional workers' children. The mean difference between professional and unqualified workers' children amounts to .53 SD while that between professional and qualified workers' children amounts to .47 SD. These differences are moderate.

Other authors also found that anxiety symptoms are more frequent in children from lower SES. Yet this is not so much the case of a direct relationship between anxiety and SES; these symptoms are related more to academic achievement. Unqualified and qualified workers' children are generally less successful in school and therefore more often scolded which is the reason why they experience more anxiety in school than do professional workers' children. Also, the demands of the school are better adapted to the latter. The frequency of anxiety symptoms in such a large number of qualified and unqualified workers' children (about 18%) is quite disturbing. There is a clear indication that the school should pay more attention to the specific situation of these children.

There were no significant differences between SES groups in neurotic symptoms or psychosomatic troubles. It was found that in 8th grade pupils of any SES groups these symptoms are very rarely observed. It is only in exception cases,therefore, that these phenomena have a disturbing effect on the children's academic achievement and conduct.

DIFFERENCES BETWEEN EQUALLY INTELLIGENT CHILDREN WITH REGARD TO THE SOCIO-ECONOMIC STATUS OF THE FAMILY

The results of 8th grade pupils

When studying differences among children coming from families with different socio-economic status (SES) it became evident that these children differ significantly in inteligence. Consequently we were interested to find out whether there were any differences in academic achievement and various personality characteristics among equally intelligent children from different SES groups. In forming these groups we used the same method as described in the case of 4th grade pupils.

Here again, our hypothesis was based on the assumption that equally intelligent children would differ significantly with regard to SES. We anticipated that children from families with higher SES would do better in school, have higher occupational and educational aspirations, better study habits and style of learning and would also differ in various personality characteristics from children whose families had a lower SES.

A comparison between equally intelligent urban and rural children was not carried out for the same reasons as described in the case of 4th grade pupils.

The Results of the Achievement Tests

10.1.1.* The results presented in Table 28 indicate that professional workers' children received significantly higher scores in the reading achievement test and achievement tests in individual school subjects than the children of unqualified workers. The mean differences between the two groups are as follows: Reading achievement .34 SD, Slovene language .34 SD, Mathematics .38 SD, English language .50 SD, History .54 SD and Biology .36 SD. The differences between professional and unqualified workers' children decreased considerably in this comparison except for English language and History where the differences are quite pronounced and a little larger than in other subjects. In this case the hypothesis is confirmed entirely.

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*The ciphers correspond with the hypothesis number (see page 47).

11.1.2. Professional and qualified workers' children also differ significantly in the majority of subjects. The former received higher mean scores than the latter. The mean differences are as follows: Reading achievement .40 SD, Slovene language .42 SD, English language .54 SD and Biology .34 SD. It is interesting that the differences in Mathematics and History are not significant. The hypothesis is consequently not entirely confirmed. The differences emerged mostly in linguistic fields while in the case of Mathematics and History they decreased considerably and are no longer significant (see Table 29).

School marks

11.2.1. At the end of the school year, professional workers' children received significantly higher school marks than unqualified workers' children. The mean differences are as follows: Slovene language .60 SD, English language .47 SD, Mathematics .40 SD, History .58 SD and Biology .69 SD. The difference in the Grade point average for these two groups is .66 SD. The hypothesis is confirmed entirely. The differences in school marks did decrease in this comparison but they are still relatively large.

11.2.2. There are also significant differences in school marks between professional and qualified workers' children. At the end of the school year, the former had considerably higher marks than the latter. The mean differences between the two groups are as follows: Slovene language .51 SD, Mathematics .47 SD, English language .62 SD, History .72 SD and Biology .63 SD. The difference in the Grade point average for these two groups is .66. The results confirm the hypothesis entirely. In this comparison the differences decreased only slightly and they remain quite large.

11.2.3. A comparison between equally intelligent children of qualified and unqualified workers revealed that the two groups do not differ significantly in this respect, i.e. they received more or less the same mean marks. The hypothesis is not confirmed.

Occupational Aspirations and Expectations

11.3.1. Professional workers' children have considerably higher occupational aspirations and expectations than unqualified workers' children. The mean difference in occupational aspirations is 1.14 SD and in occupational expectations 1.36 SD. These differences are surprisingly large and they increased only slightly in the comparison of equally intelligent children. The hypothesis is confirmed entirely.

11.3.2. There are also large differences in occupational aspirations and expectations between professional and qualified workers' children. The former considerably excel the latter. The mean difference in occupational aspirations is .85 SD and in occupational expectations .99 SD. Here again, the hypothesis is confirmed entirely. The differences between the two groups did not decrease and they remained practically the same even though the children in this comparison were equally intelligent.

11.3.3. In the comparison between equally intelligent children of qualified and unqualified workers, the differences in occupational aspirations decreased and are no longer significant. The difference remains significant in occupational expectations which are higher in qualified workers' children. The mean difference is .38 SD. The hypothesis is not entirely confirmed.

Educational aspirations

11.4.1. Professional workers' children also have higher educational aspirations than the children of unqualified workers. The mean difference is 1.10 SD. The hypothesis is confirmed. The difference is very large and it did not decrease very much in this comparison.

11.4.2. Professional workers' children also have higher educational aspirations than qualified workers' children. The mean difference is .89 SD. Again, this large difference did not decrease when comparing children with equally developed intelligence. The hypothesis is confirmed in this case as well.

11.4.3. The difference in educational aspirations between qualified and unqualified workers' children decreased in this comparison and is no longer significant. The hypothesis is consequently rejected.

Study Habits

11.5.1. Considering the total results, professional workers' children have significantly better study habits than unqualified workers' children. The mean difference is .72 SD. Similar differences between the two groups also emerge in study habit factors, the mean differences being as follows: homework schedules .46 SD, methods and techniques of learning .52 SD, coping with problems of learning .85 SD and self-confidence .36 SD. The hypothesis is confirmed entirely. It is interesting that the differences in study habits between these two groups did not decrease but remained practically the same in this comparison.

11.5.2. The difference in study habits between professional and qualified workers' children is also significant and quite large. The former are better in this respect than the latter. The mean difference with regard to the total results is .54 SD. Professional workers' children also excel in study habit factors. The differences are as follows: homework schedules .36 SD, methods and techniques of learning .46 SD, coping with the problems of learning .52 SD, self-confidence .40 SD. The hypothesis is again entirely confirmed. In this comparison of equally intelligent children the differences did not decrease but they slightly increased which indicates that a child's study habits are strongly related to the SES of his family.

11.5.3. In equally intelligent children of qualified and unqualified workers the differences in study habits decreased and are no longer significant. The hypothesis is not confirmed. Even in the original comparison the differences between these two groups were comparatively small. The one difference that did remain, however, is in the coping with problems of learning where qualified workers' children still excel significantly. The mean difference is .40 SD.

Style of learning

11.6.1. Professional workers' children showed a significantly better style of learning than equally intelligent children of unqualified workers. The mean difference is .45 SD. The hypothesis is confirmed. The differences decreased but they are still large enough to be significant. It would seem that a child's learning style depends both on his intelligence and SES.

11.6.2. Professional workers' children also have a better style of learning than qualified workers' children. The mean difference is .63 SD. The hypothesis is confirmed. Even though equally intelligent children are compared, the differences are still comparatively large.

11.6.3. The difference between qualified and unqualified workers' children was significant neither in the original nor in this comparison. The hypothesis is consequently rejected.

Social behavior

11.7.1. There were significant differences between professional and qualified workers' children in this respect as well. The former excel significantly; the mean difference is .44 SD. The results confirm the hypothesis. In this comparison the differences decreased to a certain extent but they are still quite large.

11.7.2. In the original comparison of professional and qualified workers' children differing in intelligence, the difference between them was small yet significant while in this comparison it is no longer significant. The hypothesis is rejected.

11.7.3. The difference between qualified and unqualified workers' children was significant neither in the original nor in this comparison. The hypothesis is consequently rejected.

Aggressive Behavior

11.8.1. There were no significant differences. In this respect between professional and qualified workers' children either in the original comparison or in this one. The hypothesis is not confirmed.

11.8.2. The same was true of professional and qualified workers' children. The hypothesis is rejected.

11.8.3. Nor were there any differences between qualified and unqualified workers' children in either comparison. The hypothesis is rejected again.

Restless behavior

11.9.1. There were no significant differences in this respect between the children of professional and qualified workers in either comparison. The hypothesis is not confirmed.

11.9.2. Similarly, there were no significant differences between the children of professional and qualified workers in either comparison. The hypothesis is rejected.

11.9.3. The same was true of qualified and unqualified workers' children. The hypothesis is rejected again.

Anxiety symptoms

11.10.1. The difference between professional and qualified workers' children decreased in this comparison but it still remained significant. The mean difference is .36 SD. The hypothesis is confirmed. The children of less educated parents generally show more anxiety symptoms than their age-mates of more educated parents. This finding, however, is valid for largely different SES groups.

11.10.2. In the original comparison the differences between professional and qualified workers' children were significant while in this one they are not. The hypothesis is consequently rejected.

11.10.3. The difference between qualified and unqualified workers' children was significant neither in the original nor in this comparison. The hypothesis is rejected.

Neurotic symptoms

11.11.1. There were no significant differences in this respect between professional and qualified workers' children either in the original or in this comparison. The hypothesis is rejected.

11.11.2. The same was true of professional and qualified workers' children. The hypothesis is rejected.

11.11.3. Nor were there any significant differences in this respect between qualified and unqualified workers children in either comparison. The hypothesis is consequently rejected again.

DISCUSSION OF RESULTS

The results indicate that significant difference in achievement test scores occur between children of professional and unqualified workers even if these two groups are equally intelligent. The former have a more extensive and better knowledge of the basic school subjects than the latter. As opposed to the original comparison in which the children were not equally intelligent, the differences in this comparison were cut by half. Intelligence is obviously a major factor in academic achievement but not the only one. The differences between these two groups which are farthest apart with regard to SES, still remain. Thus it is evident that SES is also a very important factor in academic achievement. The children of more educated parents do better in school without regard to intelligence.

The school mark differences between professional and unqualified workers' children were rather larger than those in their achievement test scores. This means that the SES of the family figures more in the teachers' marks than in achievement test results. It was observed that both 4th and 8th grade teachers discriminate between these two groups more than the children's objective knowledge would allow. It is known that in marking, teachers take into consideration not only pupils' knowledge but also other characteristics, for instance linguistic expression, diligence, attitudes towards teachers and school mates. Professional workers' children are thus in a more favourable position than unqualified workers' children. Many teachers are probably not even aware that they are more severe in marking these children.

Similar achievement differences were found between professional and qualified workers' children. The former are considerably better in reading in linguistic subjects (Slovene, English) and in Biology and are the same only in Mathematics and History achievement. Thus it is evident that these two SES groups of equally intelligent children still differ considerably in their academic achievement in the majority of school subjects. It can be stated again that children's academic achievement does not depend only on their intelligence but largely on SES factors.

Again, the school mark differences between the two groups are larger than those in achievement test results. It is our opinion that this discrepancy has the same origin as the one described earlier. Teachers, without always being aware of this fact, are more severe in marking qualified workers' children.

A comparison between equally intelligent children of qualified and unqualified workers' indicates that there are no significant differences between them regarding their achievements. These two groups also obtain approximately equal mean marks for different school subjects. In this case it is evident that the effects of SES are not so pronounced in the teachers' subjective evaluation of their pupils' performance. This can be explained if we consider that these two groups are quite similar with regard to both their knowledge and SES characteristics.

In motivation variables, there are very large differences between professional workers' children on one hand, and unqualified and qualified workers' children on the other. The former have considerably higher occupational and educational aspirations than the latter. It is interesting that the differences in occupational and educational aspirations between SES groups did not decrease although equally intelligent children were compared. It is thus evident that children's occupational and educational aspirations are much more dependent on the SES factors than on intelligence.

The differences in occupational and educational aspirations are particularly noticeable because they are the largest found in this research. SES groups differ less in achievement test results, school marks, study habits and other characteristics than in aspirations. This indicates that also in our society the level of children's occupational and educational aspirations is determined mostly by the variables of the familial environment, particularly by the parents' level of education and their attitudes towards studying and education in general.

The results clearly indicate that unqualified and qualified workers children although equally intelligent have much lower aspirations than professional workers' children. The low level of aspirations and motivation hinders these children in obtaining further education and a better occupational career more than the intelligence level. Therefore special attention ought to be paid to the development of their aspirations.

Considerable differences between SES groups were found in study habits as well. Professional workers' children make better homework schedules apply more effective studying techniques and methods, they are better at coping with problems and are more self-confident than unqualified and qualified workers' children. It is interesting that the differences between SES groups remained approximately the same in this comparison. Thus it can be stated that study habits are also largely dependent on the SES of the child's family and not so much on his intelligence.

Similar differences between SES groups were found in style of learning as well. Without regard to intelligence, professional workers' children use more rational and effective ways of studying which help them to acquire knowledge faster than is the case with unqualified and qualified workers' children. It seems that style of learning is also largely dependent on the SES of the family. This can be explained if we consider that more educated parents advise and help them more effectively with studying, doing homework and coping with various problems in learning. Unqualified and qualified workers' children are thus rather deprived in this respect. Teachers and school counsellors should take special care to help these children improve their style and methods of learning.

It is interesting that very small or no differences between SES groups were found in personality characteristics. Differences are noticeable only in social behavior and anxiety symptoms but even this only in the comparison of the two SES groups that are farthest apart. Generally speaking, professional workers' children are somewhat more socialized and experience less anxiety than equally intelligent children of unqualified workers. In the comparison of equally intelligent professional and qualified workers' children the differences in social behavior and anxiety symptoms decreased and are no longer significant. No significant differences in aggressive behavior, restless behavior and neurotic symptoms were found in either comparison. As they get older and come under the influence of educational programs which are uniform for all children without regard to SES, the children are subject to socialization and they gradually drop negative forms of behavior. Therefore the differences between SES groups are very small in this respect, or they do not exist at all.

TABLE 28: The results of equally intelligent professional and unqualified workers' children in achievement tests, school marks, occupational and educational aspirations, study habits and personality characteristics

	M_1	SD_1	M_3	SD_3	t	p
Achievement tests:						
Reading Achievement	86.51	13.95	81.81	13.34	2.01	.05
Slovene language	94.48	13.65	89.59	14.63	1.96	.05
Mathematics	15.85	5.19	13.81	5.63	2.19	.05
English language	40.20	10.88	34.71	10.54	2.82	.01
History	29.93	7.99	25.42	8.34	3.18	.001
Biology	56.75	12.15	52.17	12.22	2.19	.05
School marks:						
Slovene language	3.76	.94	3.18	.93	3.49	.001
Mathematics	3.50	.99	3.10	.98	2.30	.05
English language	3.73	1.05	3.22	1.10	2.50	.01
History	4.08	.89	3.52	.95	3.42	.001
Biology	4.11	.92	3.44	.93	4.07	.001
Grade point average	3.86	.80	3.28	.84	3.94	.001
Occupational aspirations*	1.75	.98	3.20	1.11	8.07	.001
Occupational expectations*	1.69	.88	3.45	1.00	10.84	.001
Educational aspirations*	1.66	.92	2.94	1.04	7.48	.001
Study habits:						
Homework schedules	71.68	11.80	65.89	12.61	2.72	.001
Methods and techn. of learning	67.25	10.92	61.54	10.32	3.08	.001
Coping with problems	43.62	4.10	38.59	6.38	5.47	.001
Self-confidence	16.35	3.88	14.84	4.37	2.13	.05
Total result	409.45	38.14	378.57	42.35	4.09	.001
Style of learning	19.68	3.20	17.91	4.36	2.69	.01
Social behavior	21.29	2.93	19.87	3.28	2.66	.01
Aggressive behavior**	14.12	1.48	13.97	1.71	.53	n.s.
Restless behavior**	20.39	3.45	20.53	3.31	.24	n.s.
Anxiety symptoms**	18.19	3.06	16.85	4.15	2.13	.05
Neurotic symptoms**	23.85	1.91	24.08	1.77	.70	n.s.

M_1 = the mean of professional workers' children
SD_1= standard deviation of professional workers' children
M_3 = the mean of unqualified workers' children
SD_3= standard deviation of unqualified workers' children

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* Lower numerical value stands for higher aspirations

**Higher result indicates less frequent occurrence of the characteristic

TABLE 29: The results of equally intelligent professional and qualified workers' children in achievement tests, school marks, occupational and educational aspirations, study habits and personality characteristics

	M_1	SD_1	M_2	SD_2	t	p
Achievement tests:						
Reading Achievement	88.77	12.80	83.56	13.10	2.62	<.01
Slovene language	96.30	12.72	90.39	14.48	2.78	.01
Mathematics	15.72	5.11	14.64	5.48	1.33	n.s.
English language	41.81	10.81	35.76	10.75	3.42	.001
History	30.01	8.35	28.12	7.96	1.51	n.s.
Biology	57.78	12.60	53.89	10.14	2.21	.05
School marks:						
Slovene language	3.86	.88	3.35	1.03	3.42	.001
Mathematics	3.65	.94	3.16	1.03	3.24	.001
English language	3.82	.98	3.16	1.02	4.00	.001
History	4.21	.82	3.51	1.01	4.85	.001
Biology	4.18	.85	3.55	1.05	4.25	.001
Grade point average	3.95	.74	3.37	.90	4.51	.001
Occupational aspirations*	1.64	.96	2.65	1.18	6.15	.001
Occupational expectations*	1.68	.90	2.91	1.21	7.48	.001
Educational aspirations*	1.58	.86	2.55	1.06	6.46	.001
Study habits:						
Homework schedules	70.72	12.64	66.19	12.21	2.37	.05
Methods and techn. of learning	67.90	11.17	62.81	10.17	3.06	.01
Coping with problems	43.42	4.09	40.87	5.25	3.52	.001
Self-confidence	16.95	3.75	15.39	3.92	2.63	.01
Total results	408.51	39.03	386.46	39.46	3.44	.001
Style of learning	19.98	3.23	18.13	3.83	3.39	.001
Social behavior	20.86	3.11	20.09	3.47	1.52	n.s.
Aggressive behavior**	14.15	1.46	13.83	1.72	1.33	n.s.
Restless behavior**	20.47	3.42	20.09	3.15	.73	n.s.
Anxiety symptoms**	18.77	3.11	17.94	3.08	1.72	n.s.
Neurotic symptoms**	23.99	1.81	24.10	1.40	.43	n.s.

M_1 = the mean of professional workers' children
SD_1 = standard deviation of professional workers' children
M_2 = the mean of qualified workers' children
SD_2 = standard deviation of qualified workers' children

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* Lower numerical value stands for higher aspirations

**Higher result indicates less frequent occurrence of the characteristic

TABLE 30 : The results of equally intelligent qualified and unqualified workers' children in achievement tests, school marks, occupational and educational aspirations, study habits and personality characteristics

	M_2	SD_2	M_3	SD_3	t	p
Achievement tests:						
Reading Achievement	80.29	14.08	81.25	12.47	.46	n.s.
Slovene language	86.63	15.77	88.49	13.94	.78	n.s.
Mathematics	13.27	5.04	13.19	5.35	.10	n.s.
English language	33.54	10.63	33.72	10.28	.10	n.s.
History	26.22	7.86	25.44	8.03	.62	n.s.
Biology	51.79	11.01	51.55	11.66	.14	n.s.
School marks:						
Slovene language	3.18	1.01	3.05	.91	.78	n.s.
Mathematics	3.05	1.00	2.90	.91	1.01	n.s.
English language	2.99	1.00	3.01	1.04	.17	n.s.
History	3.31	1.02	3.32	1.00	.02	n.s.
Biology	3.40	1.01	3.28	.91	.80	n.s.
Grade point average	3.23	.92	3.12	.83	.74	n.s.
Occupational aspirations*	2.84	1.23	3.18	1.11	1.85	n.s.
Occupational expectations*	3.07	1.21	3.51	1.05	2.46	.01
Educational aspirations*	2.74	1.06	3.01	1.02	1.62	n.s.
Study habits:						
Homework schedules	66.19	11.01	64.07	12.58	1.13	n.s.
Methods and techn. of learning	62.20	9.66	60.83	10.63	.84	n.s.
Coping with problems	40.52	5.64	38.10	6.29	2.59	.01
Self-confidence	15.04	3.77	14.10	4.03	1.54	n.s.
Total result	384.20	38.14	371.29	41.54	1.94	n.s.
Style of learning	17.40	4.08	17.50	4.19	.15	n.s.
Social behavior	19.66	3.28	19.54	3.32	.23	n.s.
Aggressive behavior**	13.69	1.81	13.87	1.72	.65	n.s.
Restless behavior**	20.15	3.25	20.66	3.26	.99	n.s.
Anxiety symptoms**	17.42	3.09	16.88	3.70	1.01	n.s.
Neurotic symptoms**	23.75	1.88	24.18	1.28	1.66	n.s.

M_2 = the mean of qualified workers' children
SD_2 = standard deviation of qualified workers' children
M_3 = the mean of unqualified workers' children
SD_3 = standard deviation of unqualified workers' children

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* Lower numerical value stands for higher aspirations

**Higher result indicates less frequent occurrence of the characteristic

DIFFERENCES BETWEEN BOYS AND GIRLS

The results of 8th grade pupils

In the research project we also wanted to find out whether boys and girls differed in academic achievement, intellectual abilities, occupational and educational aspirations, style of learning, study habits and other personality characteristics. Our hypothesis was based on the assumption that they would not differ in these respects. The hypothesis was tested on urban children.

Reading achievement

12.1.* Boys and girls obtained the following scores in the reading achievement test:

Groups	M	SD	F-test	p
Boys	82.70	14.64	.66	n.s.
Girls	82.24	13.89		

The hypothesis is confirmed. Boys and girls did not differ in reading achievements.

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*The ciphers correspond with the hypothesis number (see page 50).

Slovene language

12.1. The mean scores in the Slovene language achievement test were as follows:

Groups	M	SD	F-test	p
Boys	86.30	15.83	17.68	.001
Girls	91.96	14.46		

The hypothesis is rejected. The girls excelled significantly in comparison with the boys.

12.2. The teachers' marks provided the following picture:

Groups	M	SD	F-test	p
Boys	2.97	.93	51.45	.001
Girls	3.60	.99		

The hypothesis is rejected again. The girls received significantly higher marks in Slovene language than did the boys. Yet the differences are much larger in the school marks than in the achievement test results. This indicated that the teachers gave the girls more favourable marks in Slovene language.

Mathematics

12.1. Boys and girls obtained the following scores in the Mathematics achievement test:

Groups	M	SD	F-test	p
Boys	14.19	5.91	.19	n.s.
Girls	14.00	5.27		

The hypothesis is confirmed. Boys and girls were equally successful in this respect.

12.2. The school marks provided a different picture:

Groups	M	SD	F-test	p
Boys	3.00	1.00	8.14	.01
Girls	3.25	.99		

The hypothesis is not confirmed. The girls obtained significantly higher mean marks in Mathematics than did the boys. The comparison of the achievement test results, however, indicated that they do not differ in their knowledge of this subject. Thus it is clear that the girls were marked more favourably than the boys.

English language

12.1. Boys and girls obtained the following mean scores in the English language achievement test:

Groups	M	SD	F-test	p
Boys	34.29	11.55	5.94	.01
Girls	36.65	11.20		

The hypothesis is rejected. The girls obtained slightly better scores than did the boys.

12.2. The teachers' marks were as follows:

Groups	M	SD	F-test	p
Boys	2.96	1.06	33.41	.001
Girls	3.49	1.06		

The hypothesis is rejected again. The girls had significantly better marks in the subject. The results of the English language achievement test also indicated that the girls excelled yet the differences were smaller. This means that the teachers gave the girls more favourable marks.

Biology

12.1. Boys and girls obtained the following mean scores in the Biology achievement test:

Groups	M	SD	F-test	p
Boys	53.58	11.52	.45	n.s.
Girls	52.85	14.70		

The hypothesis is confirmed. Boys and girls obtained the same mean scores in this subject. Yet variability is greater in girls than in boys. More girls obtained either very high or very low scores.

12.2. The school marks for the subject were as follows:

Groups	M	SD	F-test	p
Boys	3.41	.97	16.11	.001
Girls	3.77	1.03		

The hypothesis is rejected. The girls obtained significantly higher school marks in the subject than did the boys. As the Biology achievement test results indicated no difference in the knowledge of the boys and girls it is obvious that teachers were stricter in marking the boys.

History

12.1. Boys and girls obtained the following mean scores in the History achievement test:

Groups	M	SD	F-test	p
Boys	27.19	8.15	1.30	n.s.
Girls	26.39	8.46		

The hypothesis is confirmed. There were no significant differences between boys and girls in the History achievement test results.

12.2. The teachers' mark in the subject were as follows:

Groups	M	SD	F-test	p
Boys	3.53	.99	2.87	n.s.
Girls	3.68	1.06		

The hypothesis is confirmed as boys and girls had the same mean marks in the subject. As they did not differ in the achievement test results it can be concluded that the teachers' marks are quite in accordance with the actual attaiment.

Grade Point Average

12.2. Boys and girls obtained the following Grade point average for the basic school subjects:

Groups	M	SD	F-test	p
Boys	3.21	.86	20.48	.001
Gigls	3.56	.92		

The hypothesis is not confirmed. The girls had a better Grade point average than the boys. Here it should be pointed out that we considered the subjects mentioned plus Geography, Physics and Chemistry.

Intellectual abilities

12.3. Boys and girls obtained the following scores in the Lorge-Thorndike intelligence test:

Groups	M	SD	F-test	p
Boys	43.98	11.73	6.88	.01
Girls	41.17	12.14		

The hypothesis is not confirmed. The boys obtained slightly higher scores than did the girls.

Occupational aspirations

12.4. Occupational aspirations were examined by means of a six-point rating scale (1 to 6) where a lower numeral value stands for higher aspirations. The results were as follows:

Groups	M	SD	F-test	p
Boys	2.64	1.38	.12	n.s.
Girls	2.65	1.21		

The hypothesis is confirmed. Boys and girls did not differ significantly in this respect. They differed, however, in variability which was greater in the boys than in the girls. Some boys wish to achieve very demanding occupations, other aspire to much less demanding ones while the girls are more homogeneous in this respect.

12.4. Occupational expectations provided a similar picture. Here again, lower numeral values stand for higher occupational expectations.

Groups	M	SD	F-test	p
Boys	2.94	1.38	1.20	n.s.
Girls	2.81	1.22		

The hypothesis is confirmed. The boys and girls in general did not differ in occupational expectations. The difference in variability, which was greater in the boys than in the girls, was significant. The same tendency emerged as in the occupational aspirations.

Educational aspirations

12.5. Boys and girls displayed the following educational aspirations:

Groups	M	SD	F-test	p
Boys	2.61	1.22	3.65	n.s.
Girls	2.43	1.10		

The results obtained by means of a five-point rating scale (1 = university education, 5 = elementary school) confirmed the hypothesis. On average, boys and girls did not differ in their educational aspirations. However, there was a significant interaction between SES and Sex. Professional workers' sons excelled over professional workers' daughters, while qualified and unqualified workers' daughters expressed higher educational aspirations than their male age-mates from the same SES.

Study habits

12.6. Boys and girls obtained the following scores for study habits:

Groups	M	SD	F-test	p
Boys	380.61	45.38	6.49	.01
Girls	391.70	41.31		

The hypothesis is not confirmed. The girls generally had better study habits than the boys. There was again an interesting interaction between SES and sex. Girls from families of qualified and unqualified workers had better study habits than the boys, while in professional workers' children there were no significant differences between the sexes.

A detailed analysis revealed that there were no significant differences between the sexes in those study habits that cover methods and techniques of learning and coping with problems of learning. It is interesting that the girls were rather better in homework schedules ($F = 20.17$, $p < .001$), while the boys were much more self-confident ($F = 8.93$, $p < .01$).

Style of learning

12.7. The teachers gave the following evaluation of their pupils' style of learning:

Groups	M	SD	F-test	p
Boys	18.05	3.87	.79	.n.s.
Girls	18.43	4.40		

The hypothesis is confirmed. The boys and girls generally did not differ in their critical approach and effectiveness in learning.

12.8. The teachers gave the following evaluation of their pupils' sociability:

Groups	M	SD	F-test	p
Boys	19.80	3.47	9.97	.01
Girls	20.81	3.20		

The hypothesis is rejected. The girls generally had better social relations with their age-mates and participated better in school life than did the boys.

12.9. Questions dealing with their concern about social relations and social role were answered by the pupils themselves. A higher numeral value stands for greater concern, and vice versa. The following results were obtained:

Groups	M	SD	F-test	p
Boys	21.78	11.81	.00	n.s.
Girls	21.91	12.28		

The hypothesis is confirmed. The boys and girls were equally concerned about their social relations and social role.

Aggression

12.10. The teachers gave the following evaluation of their pupils' aggression:

Groups	M	SD	F-test	p
Boys	13.14	1.95	116.13	.001
Girls	14.69	.86		

The hypothesis is not confirmed. (A higher score stands for a lesser degree of aggression.) The boys were generally more aggressive than the girls. Standard deviations also indicated differences in variability. The latter was considerably greater in boys. More boys than girls were aggressive in school.

Restlessness

12.11. Boys and girls obtained the following scores for this personality characteristic:

Groups	M	SD	F-test	p
Boys	19.27	3.58	56.21	.001
Girls	21.54	2.80		

The hypothesis is not confirmed. (Higher numeral values stand for less frequent restless behavior.) The data indicated that the boys were generally more restless than the girls. Variability was also greater in the boys. This means that more boys than girls are frequently restless in school.

Anxiety

12.12. This characteristic was evaluate as follows:

Groups	M	SD	F-test	p
Boys	18.39	3.45	10.66	.001
Girls	17.41	3.60		

The hypothesis is not confirmed. (A higher score stands for a lesser degree of anxiety.) The girls were generally more worried and felt more school anxiety than the boys.

Neurotic symptoms

12.13. The teachers also gave an evaluation of their pupils' neurotic symptoms. The results were as follows:

Groups	M	SD	F-test	p
Boys	24.00	1.85	1.83	n.s.
Girls	24.24	1.50		

The hypothesis is confirmed. (A higher score stands for less frequent manifestations of the symptoms.) The boys and girls did not differ in this respect. There were differences in variability which was a little greater in the boys.

Psychosomatic troubles

12.14. The pupils also answered questions concerning their psychosomatic troubles. (A higher score stands for greater concern about these troubles, and vice versa.) The mean results were as follows:

Groups	M	SD	F-test	p
Boys	6.53	5.98	4.99	.05
Girls	7.95	5.88		

The hypothesis is rejected. The girls were generally a little more concerned about their psychosomatic troubles than the boys. The differences, however, were small.

DISCUSSION OF RESULTS

The achievement test results indicate that girls have a better knowledge of linguistic subjects than boys. The mean differences are .37 SD in Slovene language and .20 SD in English language. American authors also found that girls after the age of 11 usually do better in linguistic and other verbal tests than do boys. The differences range from 1.0 SD to .5 SD, the mean difference being about .25 SD (Maccoby and Jacklin, 1974, p. 84). Our results in linguistic subjects are somewhat similar to these findings. In reading achievement, however, no significant differences were found between the sexes.

It is interesting that boys and girls achieved very much the same success in Mathematics, History and Biology. On the basis of various studies the above-mentioned authors conclude that in adolescence boys usually do slightly better in Mathematics and some technical subjects. The differences vary in different studies but they are on average relatively small. These differences are also found in later years, that is in secondary schools and further education.

It can be concluded from numerous studies that in adolescence both sexes begin developing more stable interests for various fields and activities. Girls are more attracted to linguistic subjects and literature while boys show more affinity with mathematical, natural and technical subjects. Such orientation is doubtless very much a result of the still present traditional ideas on sex roles which are in some way or other conveyed to the growing youth in the process of their upbringing. This type of difference between the sexes is diminishing under the influence of new social relations, fast technological development and a better education which is equal for all children.

It is surprising that girls have ensiderably better school marks in all the subjects but History. The mean differences were the following: Slovene language .63 SD, Mathematics .25 SD, English language .49 SD and Biology .35 SD while achievement test results indicated differences between the sexes only in Slovene and English language. But even so, the test result differences in these two subjects were only small while those in the school marks were rather larger. Thus, girls have on average better school marks than boys. This indicates that teachers consider not only the knowledge a pupil displays but also other features that seem to be related to the sex; boys, for example, are according to our results more aggressive and restless and also less sociable than girls. Consequently, boys and girls are treated somewhat differently. In boys, there was a negative correlation between aggression and Grade point average in the basic school subjects (r = -.31) while in girls this correlations was also negative but much lower (r = -.10). Boys who are more aggressive obtain lower marks in school which is not the case with girls. This differentiation between the sexes is also reflected in the correlations between sociability and Grade point average; the correlation was rather higher in girls (r = .57) than in boys (r = .38). More sociable girls in general obtain higher marks than do boys. Sociability is appreciated in the boys as well yet not to the same extent.

Boys showed slightly more developed intellectual abilities than did girls. The mean difference was .24 SD. This is a small difference which had practically no bearing on the achievement test results. The latter indicated that boys and girls have practically the same knowledge of school subjects.

It should be pointed out, however, that a non-verbal intelligence test was used. It included classification and analogies of pictorial symbols and number seriations. It is possible, considering their different general orientation, that in adolescence boys are better at tackling non-verbal tests while girls do better in verbal ones. Generally speaking, however, these differences are small or even non-existent.

There were no significant differences between the sexes in occupational and educational aspirations and in occupational expectations. It is interesting that we obtained similar results in our children in 1969 when a cross-national study of school children was carried out. Its results indicated, among other things, that in other countries boys have higher occupational and educational aspirations than girls. Our results are therefore quite encouraging; our girls' aspirations are as high as those of boys. This is understandable by the fact that in our country equality between the sexes is probably practised on a much larger scale than in certain other countries participating in the research, where it is harder for women to succeed in various professions and to obtain leading positions in society.

Neither were there any differences between the sexes in the style of learning. Boys and girls are approximately equally effective in cognitive operations and their critical approach to the material studied.

There were, however, differences between boys and girls in study habits. Girls have somewhat better study habits; the mean difference is .25 SD. The differences was particularly noticeable in homework schedules where it amounted to .41 SD. Girls study more regularly, their studying is better planned, and they also show greater compatibility with the demands of the school. Most probably this is one of the reasons why they obtain better marks than do boys. It is interesting, however, that boys are more self-confident in studying; the mean difference is .26 SD. They display greater certainty about writing a good paper in school or answering teachers' questions correctly. Yet these differences between the sexes are not large.

Slight differences can also be observed in sociability; girls, according to the teachers, mix better with their age-mates and also cooperate better with them than do boys. The mean difference is .30 SD, yet it cannot be concluded that the sexes differ essentially in social learning and social responsiveness. The pupils' answers in connection with their concern about social relations and their social role indicate that boys and girls do not differ significantly in this respect. Thus it can be concluded that there are no differences, or only small ones, between boys and girls with regard to sociability.

On the other hand, large differences between the sexes were found in aggression and restlessness; these features were much more often observed in boys, the mean difference being .91 SD in aggression and .58 SD in restlessness. These findings are very much in accordance with those of other authors (Kagan and Moss, 1962). Longitudinal studies indicate that physical and verbal aggression is more frequent in boys than in girls, which is the case not only in childhood but also in adolescence. Authors emphasise that aggressive behavior is usually tolerated in boys while in girls it is not.

At this stage, girls also showed more anxiety, the mean difference being .27 SD. Other authors also found more anxiety symptoms in girls (Sarason et al, 1960). From our results it is evident that the differences are very small. No differences were found in the case of neurotic symptoms; these appear equally rarely in boys and girls.

There were some differences, however, amounting to .24 SD in concern about psychosomatic troubles, in that girls more often complain about tiredness and not feeling well, and are generally more concerned about their health than boys. It is known that due to sexual maturing and other changes in early adolescence girls are somewhat more sensitive than boys. This is reflected in our results as well. It should be emphasised, however, that the differences in this respect were only small.

REPORT ON CORRELATIONS

The results of 8th grade pupils

The variables in our research were divided into predictor and criterion variables. This chapter presents criterion-criterion, predictor-predictor and predictor-criterion relationships.

CRITERION-CRITERION RELATIONSHIPS

Hypothesis 1: There will be positive relationships between Achievement tests in individual school subjects.

TABLE 31: Correlations between Achievement tests (urban children)

	Read. test	Slov. lang.	Math.	Engl. lang.	Hist.
Slov.lang.	.59				
Math.	.48	.56			
Engl.lang.	.60	.59	.50		
Hist.	.56	.47	.57	.53	
Biol.	.64	.53	.50	.58	.56

The hypothesis is confirmed. All the correlations between the results of Achievement tests were positive and moderate, ranging between .47 (Slovene language and History) and .59 (Slovene and English language).

Correlations between reading achievement and the results of Achievement tests were positive and moderate, the coefficients ranging between .48 (Mathematics) and .64 (Biology).

TABLE 32 : Correlations between Achievement tests (rural children)

	Read. test	Slov. lang.	Math.	Engl. lang.	Hist.
Slov.lang.	.59				
Math.	.45	.55			
Engl.lang.	.48	.59	.50		
Hist.	.62	.52	.52	.41	
Biol.	.60	.59	.52	.55	.67

The rural children's results confirm the hypothesis as well. All the correlations between the results of Achievement tests were positive and moderate, ranging between .41 (History and English language) and .67 (History and Biology).

The correlations between reading achievement and the results of Achievement test in individual school subjects were also positive and moderate, ranging betwee .45 (Mathematics) and .62 (History). The correlations between the results of Achievement tests were more or less equally high in both the urban and rural sample.

The results also indicated that in both urban and rural children there were moderate correlations between reading achievement and Achievement tests in individual subjects. In both cases the correlation with Mathematics was somewhat lower than with other subjects. Reading achievement is obviously an important factor in academic achievement in general.

Hypothesis 2: There will be positive relationships between school marks in individual school subjects.

TABLE 33: Correlations between school marks in basic subjects (urban children)

	Slov. lang.	Math.	Engl. lang.	Hist.	Biol.	Physics	Chem.	Geogr.
Math.	.73							
Engl.l.	.74	.73						
Hist.	.70	.67	.70					
Biol.	.73	.72	.71	.76				
Physics	.68	.78	.70	.69	.68			
Chem.	.76	.76	.76	.74	.81	.75		
Geogr.	.73	.69	.72	.80	.76	.70	.78	
G.p.a.	.87	.87	.87	.87	.88	.85	.91	.88

The urban children's results confirm the hypothesis. All the correlations between school marks in individual school subjects were positive and high, ranging between .67 (History and Mathematics) and .81 (Chemistry and Biology). Still higher were the correlations between school marks in individual subjects and the Grade point average; they ranged between .85 and .91.

TABLE 34: Correlations between school marks in **basic** subjects (**rural** children)

	Slov. lang.	Math.	Engl. lang.	Hist.	Biol.	Physics	Chem.	Geogr.
Math.	.73							
Engl.l.	.70	.63						
Hist.	.60	.64	.60					
Biol.	.73	.67	.70	.68				
Physics	.63	.70	.60	.63	.64			
Chem.	.74	.70	.68	.71	.78	.69		
Geogr.	.72	.68	.61	.78	.72	.71	.74	
G.p.a.	.87	.84	.82	.84	.87	.82	.89	.87

The hypothesis is confirmed again. All the correlations between the school marks in the subjects mentioned were positive and high, ranging between .60 (History, Physics, English language) and .78 (Chemistry and Biology). The correlations between school marks in individual subjects and the Grade point average were higher still, ranging between .82 (English language) and .89 (Chemistry).

The results indicated a high correlationsbetween marks in school subjects both in urban and rural pupils. This means that a pupil who has higher marks in one subject will also have higher marks in other subjects.

Hypothesis 3: There will be positive relationships between the results of Achievement tests and school marks in the same subjects.

TABLE 35: Correlations between Achievement tests and school marks in the same subjects (urban children)

School subjects	Achievement test and school marks	Achievement test and G.p.a.	Reading test and school marks
Slov.lang.	.58	.62	.52
Math.	.57	.58	.49
Engl.lang.	.64	.60	.52
Hist.	.56	.57	.53
Biol.	.51	.51	.51

The hypothesis is confirmed. All the correlations between the Achievement test scores and school marks in the same subjects were positive and moderate, ranging between .51 (Biology) and .64 (English language).

The correlations between the scores in various Achievement tests and the Grade point average were also positive and moderate, ranging between .49 (Mathematics) and .53 (History).

TABLE 36: Correlations between Achievement tests and school marks in the same subjects (rural children)

School subjects	Achievement test and school marks	Achievement test and G.p.a.	Reading test and school marks
Slov.lang.	.53	.58	.51
Math.	.47	.48	.43
Engl.lang.	.49	.40	.47
Hist.	.62	.55	.55
Biol.	.52	.58	.44

The hypothesis is confirmed again. All the correlations between the Achievement test scores and the school marks in the same subjects were positive and moderate, ranging between .47 (Mathematics) and .62 (History).

The correlations between the Achievement test scores and the Grade point average do not differ much from those mentioned above. They range between .40 (English language) and .58 (Slovene language).

The correlations between the pupils' reading achievement and their marks in individual subjects were also positive and moderate, ranging between .43 (Mathematics) and .55 (History).

The hypothesis is entirely confirmed and a general conclusion can be made: the correlations between Achievement tests and school marks in the same subjects, as well as those between Achievement tests and the Grade point average, were moderate in both urban and rural children.

The results also indicated moderate correlations between reading achievement and school marks; pupils with a larger vocabulary and better reading comprehension received on the whole higher marks in school subjects.

PREDICTOR-PREDICTOR RELATIONSHIPS

Hypothesis 4: There will be positive relationships between occupational aspirations, occupational ecpectations and educational aspirations.

TABLE 37: Correlations between occupational aspirations, occupational expectations and educational aspirations (urban children)

	Occupational aspirations	Occupational expectations
Occupational expectations	.80	
Educational aspirations	.66	.71

The hypothesis is confirmed. The correlation between occupational aspirations and occupational expectations was high (.80) while the correlation of these two variables with educational aspirations was somewhat lower but still considerable (.66 and .71).

TABLE 38: Correlations between occupational aspirations, occupational expectations and educational aspirations (rural children)

	Occupational aspirations	Occupational expectations
Occupational expectations	.70	
Educational aspirations	.58	.65

The hypothesis is confirmed. In rural children, the correlations between occupational aspirations and occupational expectations were also quite high (.70). These two variables correlated somewhat lower with educational aspirations (.58 and .56). The hypothesis is entirely confirmed; occupational aspirations and occupational expectations as motivational predictors proved to be strongly correlated. The majority of pupils also expected to fulfil their occupational aspirations.

Hypothesis 5: There will be positive relationships between four factors of study habits.

TABLE 39: Correlations between four factors of study habits (urban children)

	Homework schedules	Methods and techniques of learning	Coping with problems in learning	Self-confidence
Methods and techniques of learning	.58			
Coping with problems in learning	.31	.32		
Self--confidence	.32	.44	.40	
Total score	.83	.80	.57	.56

The hypothesis is confirmed; the factors of study habits proved to be related positively. The highest correlation was between homework schedules and methods and techniques of learning (.58). The correlation between coping with problems in learning and self-confidence was considerably lower. There is a significant relationship between the latter two factors as well but the relationship was not high (.40).

The results also indicated that all the factors correlated significantly with the total study habits score. Homework schedules and methods and techniques of learning appear to have the strongest connection with this total score (.83 and .80), followed by coping with problems in learning and self-conficence (.57 and .56).

TABLE 40: Correlations between four factors of study habits (rural children)

	Homework schedules	Methods and techniques of learning	Coping with problems in learning	Self-confidence
Methods and techniques of learning	.72			
Coping with problems in learning	.23	.20		
Self-confidence	.48	.48	.21	
Total score	.88	.86	.41	.63

The hypothesis is confirmed. The correlations between the various factors were positive and significant. Here again, the highest correlation was between methods and techniques of learning and homework schedules (.72). These two factors correlated considerably lower with self-confidence and lower still with coping with problems in learning. The latter correlation, even though statistically significant, was very low (.21).

In the rural children, all the factors also correlated significantly with the total study habits score. Here again, homework schedules and methods and techniques of learning appear to have the strongest connection with this total score

(.88 and .86), followed by self-confidence (.63) and coping with problems in learning (.41).

It can be concluded from the results that homework schedules and methods and techniques of learning are rather closely related predictors while coping with problems in learning and self-confidence are more independent predictors.

Hypothesis 6: There will be negative relationships between the children's social, aggressive and restless behavior, anxiety and neurotic symptoms.

TABLE 41: Correlations between social behavior and other characteristics (urban children)

	Aggressive behavior	Restless behavior	Anxiety simptoms	Neurotic symptoms
Social behavior	.37	.35	.34	.19

Note: Remember that the variables aggressive and restless behavior, anxiety and neurotic symptoms are reversed. Thus, any correlations of these variables with social behavior, if positive, are actually negative correlations.

The correlations were negative, significant and very much the same; social behavior correlated with aggressive behavir -.37, with restless behavior -.35, with anxiety symptoms -.34 and with neurotic symptoms -.19.

TABLE 42: Correlations between social behavior and other characteristics (rural children)

	Aggressive behavior	Restless behavior	Anxiety symptoms	Neurotic symptoms
Social behavior	.29	.23	.44	.20

Note: Same as in Table 41.

Here again, the correlations were negative and significant. The highest negative correlation was between social behavior and anxiety symptoms (-.44) while the lowest was between social behavior and neurotic symptoms (-.20).

The hypothesis is entirely confirmed. More sociable pupils proved to be generally less aggressive, restless or anxious and also displayed fewer neurotic symptoms. It should be emphasised, however, that these variables were not strongly correlated.

Hypothesis 7: There will be a negative relationship between anxiety symptoms and aggressive and restless behavior

TABLE 43: Correlations between aggressive, restless behavior, anxiety and neurotic symptoms (urban children)

	Aggressive behavior	Restless behavior	Anxiety symptoms
Restless behavior	.72		
Anxiety symptoms	-.18	-.14	
Neurotic symptoms	.22	.24	.23

In the urban children, the correlation between anxiety symptoms and aggressive behavior amounted to -.18 while the correlation between anciety symptoms and restless behavior was -.14. Both correlations were negative and significant.

TABLE 44: Correlations between aggressive, restless behavior, anxiety and neurotic symptoms (rural children)

	Aggressive behavior	Restless behavior	Anxiety symptoms
Restless behavior	.73		
Anxiety symptoms	-.13	-.20	
Neurotic symptoms	.26	.28	.13

The picture was similar for the rural children. The correlation between aggression and anxiety was -.13, and between anxiety and restlessness -.20; both correlations were negative and significant.

The hypothesis is entirely confirmed. More anxious pupils proved to be both less aggressive and restless. However, the correlation between the variables was rather weak.

Hypothesis 8: Neurotic symptoms in children will correlate positively with aggression, restlessness and anxiety.

The hypothesis is confirmed for both urban and rural children (see Tables 43 and 44). The correlations ranged from .22 to .24 in urban children, and from .13 to .26 in rural children.

The results indicated that neurotic children were a little more aggressive and restless or else more anxious. At the same

same time it should be emphasised that these correlations, though statistically significant, were rather low.

Hypothesis 9: There will be a positive relationship between restless and aggressive behavior.

The hypothesis is entirely confirmed (see Tables 43 and 44). The correlation between these two characteristics was .72 in the urban children and .73 in the rural children. Restless children displayed more aggression, and vice versa. These two characteristics are highly correlated and cannot be treated as independent predictors.

The high correlation between these two variables was probably also due to the fact that the teachers did not clearly distinguish the two features. We assume that aggressive pupils were often considered restless and vice versa.

Hypothesis 10: Concern about social relations and familial relations will correlate positively with pupils' psychosomatic troubles.

TABLE 45: Correlations between concern about social relations, familial relations and psychosomatic troubles (urban children)

	Concern about soc. rel.	Concern about fam. rel.
Concern about fam.rel.	.64	
Psychosomatic troubles	.44	.59

The questionnaire was answered by pupils.

In the urban children, the correlation between concern about social relations and psychosomatic troubles was .44 while the correlation between concern about familial relations and psychosomatic troubles was .59 (see Table 45). Both correlations were positive and moderate.

TABLE 46: Correlations between concern about social relations, familial relations and psychosomatic troubles (rural children)

	Concern about soc. rel.	Concern about fam. rel.
Concern about fam. rel.	.72	
Psychosomatic troubles	.55	.68

In the rural children, the correlation between concern about social relations and psychosomatic troubles was .55, while the correlation between concern about familial relations and psychosomatic troubles was higher still, i.e. .68. (See Table 46!) Both correlations were positive and comparatively high.

The hypothesis is entirely confirmed. Pupils who were more concerned about their relations with schoolmates and about their social role reported more psychosomatic troubles. Similarly, pupils concerned about family affairs had more psychosomatic complaints.

Hypothesis 11: There will be a positive relationship between concern about familial and social relations.

The correlation between these two variables was .64 in the urban children, and .72 in the rural children. Both correlations were positive and high; the hypothesis is entirely confirmed.

Children who were ill-treated in their familial circle and therefore more concerned about familial relations proved to be less successful socially, the connection between these phenomena, however, was somewhat stronger in the rural than the urban sample.

Hypothesis 12: There will be a positive relationship between intellectual abilities and style of learning.

TABLE 47: Correlations between intellectual abilities, style of learning, occupational and educational aspirations and study habits (urban children)

	Intellectual abilities	Style of learning
Style of learning	.49	
Occupational aspirations*	-.36	-.48
Occupational expectations*	-.36	-.47
Educational aspirations*	-.44	-.58
Study habits:		
homework schedules	.07	.23
methods and techniques of learning	.13	.21
coping with problems in learning	.31	.46
self-confidence	.31	.43
total score	.21	.41

Note: *Remember that the variables occupational aspirations, occupational expectations and educational aspirations are reversed. Thus, any correlations involving these variables, if negative, are actually positive correlations.

TABLE 48: Correlations between intellectual abilities, style of learning, occupational and educational aspirations and study habits (rural children)

	Intellectual abilities	Style of learning
Style of learning	.36	
Occupational aspirations*	-.34	-.39
Occupational expectations*	-.30	-.39
Educational aspirations*	-.28	-.43
Study habits:		
homework schedules	.12	.26
methods and techniques of learning	.06	.23
coping with problems in learning	.22	.40
self-confidence	.15	.30
total score	.21	.37

Note: *Same as in Table 17.

Intellectual abilities and style of learning (the latter was rated by teachers) proved to be positively and significantly correlated; in the urban children, the correlation was .49, while in the rural children it was .36. In both cases the hypothesis is confirmed.

On the basis of these findings it can be concluded that more intelligent pupils acquire a better style of learning; they critically absorb the learning material and use it in solving different problems in a more successful way than less intelligent children. The correlation between these two variables was moderate in the urban children and slightly lower in the rural children; the latter were probably given less objective possibly more favourable scores for style of learning.

Hypothesis 13: Intellectual abilities will correlate positively with occupational and educational aspirations.

The highest correlation in the urban sample was between intellectual abilities and educational aspirations (.44) while the correlation between intellectual abilities and occupational aspirations and that between intellectual abilities and occupational expectations were slightly lower (.36 and .36).

The highest correlation in the rural sample was between intellectual abilities and occupational aspirations (.34), followed by the correlation between intellectual abilities and occupational expectations (.33) and the one between intellectual abilities and educational aspirations (.28) (see Table 48).

All these correlations were positive and significant. The hypothesis is entirely confirmed. More intelligent pupils proved to have higher occupational and educational aspirations. These variables are obviously related yet not very strongly; intelligence would only be one of the factors affecting occupational and educational aspirations.

Hypothesis 14: There will be a positive relationship between intellectual abilities, study habit factors and the total study habits score.

As can be seen from Table 47, the correlation in the urban children between intellectual abilities and study habits (total score) is .21. The correlations between intellectual abilities and various study habit factors range between .07 (homework schedules) and .31 (coping with problems in learning and self-confidence).

The picture was similar for the rural children (see Table 48). The correlation between intellectual abilities and study habits (total score) amounts to .21, while the correlations with various study habits factors range between .06 (methods and techniques of learning) and .22 (coping with problems in learning).

The total scores confirm the hypothesis for both urban and rural children. In general, more intelligent children have slightly better study habits than less intelligent children yet the correlation is weak. When considering study habits factors it becomes evident that the connection between intellectual abilities and coping with problems in learning and self-confidence is the strongest. Hence our conclusion that study habits are related more to other variables than to the child's intelligence.

Hypothesis 15: Occupational and educational aspirations will correlate positively with style of learning.

In the urban sample, the highest correlation was between style of learning and educational aspirations (.58) while occupational aspirations correlated somewhat (.48) as well as occupational expectations (.47).

The picture was similar for the rural children. The highest correlation was between style of learning and educational aspirations (.43), followed by the correlation with occupational aspirations (.39) and occupational expectations (.39).

The hypothesis is entirely confirmed; all the correlations were positive and moderate. Pupils with higher educational and occupational aspirations have a better style of learning which enables them to do better in school and elsewhere. Greater success in turn encourages children's aspirations.

Hypothesis 16: There will be a positive relationship between study habits and style of learning.

In the urban sample, the correlation between study habits (total score) and style of learning amounts to .41 (see Table 47). The correlations with various study habit factors range between .21 (methods and techniques of learning) and .46 (coping with problems in learning).

The picture is similar for the rural sample (see Table 48). The correlation between study habits (total score) and style of learning amounts to .37. The correlations between various study habit factors and style of learning range between .23 (methods and techniques of learning) and .40 (coping with problems in learning).

The hypothesis is entirely confirmed. All the correlation coefficients are positive and significant. On the whole it became evident that pupils with a better style of learning also have better study habits. Style of learning is particularly related to coping with problems in learning and self-confidence. It is our opinion that this relationship is reciprocal and that study habits also affect the children's style of learning.

Hypothesis 17: Occupational aspirations, occupational expectations and educational, aspirations will correlate positively with study habits.

In the urban sample, study habits(total score) correlated with educational aspirations .49, with occupational expectations .41, and with occupational aspirations .35. The various factors of study habits also correlated positively and significantly with these motivational variables. They ranged from .13 (occupational aspirations and homework schedules) to .50 (educational aspirations and coping with problems if learning). (See Table 49!)

The rural children's results were similar. The total scores of study habits correlated with educational aspirations .41, with occupational aspirations and expectations .36. The various factors of study habits also correlated positively and significantly with these variables. The correlations ranged from .18 (occupational aspirations and self-confidence) to .36 (educational aspirations and methods and techniques of learning). (See Table 50!)

The hypothesis is entirely confirmed. In conclusion it can be stated that pupils with higher occupational and educational aspirations generally have more developed study habits and vice versa. These variables are inter-related; better study habits contribute to greater academic achievement which in turn encourages the children's occupational and educational aspirations.

TABLE 49: Correlations between occupational aspirations, occupational expectations, educational aspirations and study habits (urban children)

	Occupational aspirations*	Occupational expectations*	Educational aspirations*
Homework schedules	-.13	-.23	-.28
Methods and techniques	-.23	-.29	-.33
Coping with problems in learning	-.44	-.44	-.50
Self-confidence	-.35	-.35	-.46
Total score	-.35	-.41	-.49

Note: *The variables occupational aspirations, occupational expectations and educational aspirations are reversed. Thus, any correlations involving these variables, if positive are actually negative correlations and vice versa.

TABLE 50: Correlations between occupational aspirations, occupational expectations, educational aspirations and study habits (rural children)

	Occupational aspirations*	Occupational expectations*	Educational aspirations*
Homework schedules	-.24	-.28	-.27
Methods and techniques	-.23	-.24	-.36
Coping with problems in learning	-.20	-.28	-.29
Self-confidence	-.18	-.23	-.26
Total score	-.36	-.36	-.41

Note: *Same as above.

PREDICTOR-CRITERION RELATIONSHIPS

Relationships between various predictors and criteria of academic achievement will be discussed in this chapter. Reading achievement test scores, results of the other achievement tests and the Grade point average will be used as criteria. Since the school marks in various subjects correlated very highly with the Grade point average, as stated earlier, they will not be included in this comparison. In the urban sample, these correlations ranged from .85 to .91, and in the rural sample from .82 to .89 (see Table 33 and 34).

Hypothesis 18: Occupational aspirations, occupational expectations and educational aspirations will correlate positively with academic achievement.

In the urban children, all the correlations between occupational aspirations, occupational expectations and educational aspirations were positive and significant. Correlations between motivation variables and Achievement tests ranged from .32 to .56. Correlations between motivation variables and the Grade point average were a little higher, i.e. from .55 to .69. (See Table 51!)

All the correlations were positive and significant in the rural children as well. Correlations between motivation variables and achievement tests ranged between .29 and .47. The hypothesis is entirely confirmed. The correlations with the Grade point average were a little higher; they ranged from .49 to .54. (See Table 52!)

TABLE 51: Correlations between predictors and criteria of academic achievement (urban children)

	Read. test	Slov. lang.	Math.	Engl. lang.	Hist.	Biol.	G.p.a.
Occupational aspirations**	-.41	-.44	-.34	-.40	-.40	-.32	-.55
Occupational expectations**	-.45	-.47	-.39	-.45	-.40	-.34	-.58
Educational aspirations**	-.50	-.56	-.49	-.55	-.46	-.38	-.69
Intellectual abilities	.50	.51	.55	.43	.42	.48	.46
Style of learning	.54	.53	.54	.53	.48	.49	.78
Study habits:							
homework sched.	.12	.17	.12	.17	.21	.20	.34
methods and techn. of learning	.24	.24	.23	.25	.28	.25	.31
coping with probl. in learning	.41	.42	.37	.45	.37	.36	.51
self-confidence	.31	.32	.40	.32	.35	.27	.50
total score	.33	.34	.35	.33	.36	.33	.52
Social beh.	.28	.27	.32	.33	.23	.29	.48
Aggressive beh.**	.09*	.17	.13	.14	.07*	.08*	.28
Restless beh.**	.12	.21	.18	.17	.14	.17	.35
Anxiety sympt.**	.27	.16	.20	.25	.14	.17	.31
Neurotic sympt.**	.11	.20	.06*	.17	.10	.17	.22
Concern about social role	-.04*	-.04*	-.01*	-.08*	-.10	-.09*	-.09*
Psychosom.troubles	-.10	-.03*	.00	-.05*	-.06*	-.10	-.04*
Concern about famil. relations	-.01*	-.04*	-.01*	-.05*	-.03*	.00	-.06*
Fathers' occup.**	-.29	-.25	-.23	-.37	-.27	-.24	-.34
Number of child. in family	-.13	-.08*	-.05*	-.12	-.02*	-.10	-.10
Living space ind.	.13	.06*	.14	.13	.03*	.09*	.21
Co-operation parents/school**	-.18	-.13	-.21	-.12	-.17	-.13	-.25

Note: *Correlation coefficients marked * are not statisticaly significant.

Variables marked ** are **reversed. Thus, any correlations involving these variables, if positive, are actually negative correlations, and vice versa.

TABLE 52: Correlations between predictors and criteria of academic achievement (rural children)

	Read. test	Slov. lang.	Math.	Engl. lang.	Hist.	Biol.	G.p.a.
Occupational aspirations**	-.47	-.38	-.29	-.30	-.34	-.39	-.49
Occupational expectations**	-.47	-.40	-.35	-.30	-.37	-.44	-.53
Educational aspirations**	-.46	-.37	-.33	-.33	-.35	-.39	-.50
Intellectual abilities	.49	.48	.51	.35	.38	.43	.41
Style of learning	.43	.49	.39	.34	.42	.47	.76
Study habits: homework sched.	.25	.22	.16	.19	.05*	.13*	.36
methods and techn. of learning	.27	.18	.12*	.21	.16	.20	.35
coping with probl. in learning	.39	.27	.25	.24	.24	.29	.39
self-confidence	.16	.10*	.18	.16	.11*	.19	.38
total score	.39	.34	.24	.30	.23	.30	.52
Social beh.	.27	.25	.14	.18	.24	.20	.43
Aggressive beh.**	.09*	.16	.05*	.09*	.04*	.07*	.30
Restless beh.**	.04*	.15	.07*	.10*	.06*	.13*	.35
Anxiety sympt.**	.18	.11*	.10*	.15	.16	.10*	.25
Neurotic sympt.**	.07*	.14	.07*	.07*	.04*	.10*	.12*
Concern about social role	-.09*	-.02*	-.08*	-.02*	-.08*	-.05*	-.10*
Psychosom.troubles	-.14	.02*	-.01*	.09*	-.18	-.04*	-.03*
Concern about famil.relations	-.17	-.12*	-.11*	.07*	-.17	-.14	-.18
Number of child. in family	-.08*	-.06*	-.06*	-.03*	-.11*	-.20	-.07*
Living space ind.	.11*	.05*	.11*	.04*	.11*	.13*	.00*
Co-operation parents/school**	-.13*	-.19	-.16	-.12*	-.13	-.15	-.33

Note: *Correlation coefficients marked * are not statistically significant.

**Variables marked ** are reversed. Thus, any correlations involving these variables, if positive, are actually negative correlations, and vice versa.

The urban and rural children's results confirm the hypothesis entirely. It is evident that the motivation variables correlate higher with the Grade point average than with the achievement test scores in individual school subjects. It can be stated, however, that there are positive relationships between these variables. These correlations are moderate. The higher the occupational and educational aspiration of pupils, the more successful they are in school, and vice versa.

On the other hand, success in school has a positive effect on children's occupational and educational aspirations. In general it can be stated than these motivation variables are a very important factor of children's academic achievement.

Hypothesis 19: There will be a positive relationship between intellectual abilities and academic achievement.

All the correlations between intellectual abilities and criterion variables were positive and significant. (See Tables 51 and 52.) In the urban children, the correlations between intellectual abilities and Achievement tests ranged from .42 (History) to .55 (Mathematics) while in the rural children they ranged between .35 (English language) and .51 (Mathematics). The correlations between intellectual abilities and the Grade point average were similar; they were .46 in the urban sample and .41 in the rural sample.

The hypothesis is entirely confirmed. The children's intellectual abilities proved to be in moderate correlation with the variables of academic achievement. More able pupils received higher scores in various Achievement tests as well as higher school marks. Intelligence can thus be considered a very important factor in academic achievement.

Hypothesis 20: There will be a positive relationship between style of learning and academic achievement.

All the correlations between style of learning (evaluated by teachers) and criterion variables of academic achievement were positive and significant. In the urban children, the correlations between style of learning and Achievement tests ranged between .48 (History) and .54 (reading achievement test, Mathematics) while in the rural children they ranged between .34 (English language) and .49 (Slovene language). The correlations between style of learning and the Grade point average were higher, namely .78 in the urban children and .76 in the rural children.

The hypothesis is entirely confirmed. Style of learning proved to be in moderate correlation with the Achievement test scores and in high correlation with the children's school marks; here it is very probable that the teachers' evaluation of their pupils' style of learning was affected by the pupils' school marks. The correlations between style of learning and Achievement test scores were lower and probably closer to reality. In conclusion it can be stated that pupils with a better style of learning obtain higher scores in Achievement tests as well as higher school marks. Style of learning correlates with intelligence, occupational and educational aspirations and study habits and makes an important contribution to the children's academic achievement.

Hypothesis 21: There will be a positive relationship between study habits and academic achievement.

In the urban children, the correlations between study habits (total score) and achievement tests range from .33 to .36 (see Table 51). The correlation with the Grade point average is higher, namely .52. All these correlations are positive and significant. The hypothesis is confirmed.

The correlations between the factors of study habits and Achievement tests range from .12 (homework schedules and Reading achievement test) to .45 (coping with problems in learning and English language achievement test). These factors correlate somewhat higher with the Grade point average, namely from .31 (methods and techniques of learning) to .51 coping with problems in learning).

The picture is similar for the rural children. The correlations between study habits total score and Achievement tests range from .23 to .39. The correlation with the Grade point average is rather higher, amounting to .52. Here again, all the correlations are positive and significant. The hypothesis is thus confirmed.

Individual study habits factors correlate with Achievement tests from .05 (homework schedules and History achievement test) to .39 (coping with problems in learning and reading achievement test). Individual study habits factors also correlate significantly with the Grade point average; the coefficients range from .35 to .39.

In both cases, i.e. in the urban and rural children, there is a moderate correlation between study habits (total score) and Grade point average. Coping with problems in learning and self-confidence figure most in the academic achievement of the urban children, while the most pronounced study habit factor in the academic achievement of the rural children is also coping with problems in learning. The correlations of other factors with academic achievement are weaker.

In general it can be stated that children with more developed study habits do better in school, and vice versa. Here is should be emphasised that study habits are particularly closely related to occupational and educational aspirations and style of learning and as a complex variable figure significantly in the academic achievement of children.

Hypothesis 22: There will be a positive relationship between social behavior and academic achievement.

As can be seen from Tables 51 and 52, the correlations between social behavior and Achievement tests ranged between .23 (History) and .33 (English language) in the urban children and between .14 (Mathematics) and .27 (reading achievement test) in the rural children.

The correlations between social behavior and the Grade point average were higher; in the urban children .48 and in the rural children .43.

The hypothesis is entirely confirmed as all the correlations between social behavior and criterion variables of academic achievement were positive and significant. In conclusion it can be stated that more sociable pupils are more successful in school, their knowledge is more extensive and their school marks higher. Although these phenomena are not strongly correlated, sociability does have an important influence on academic achievement - sociable pupils are more communicative and generally more active which is reflected in better relations with schoolmates. This not only helps them to do well in school but also encourages the process of social maturing, i.e. constructive co-operation in school and elsewhere.

Hypothesis 23: There will be a negative relationship between aggressive behavior and academic achievement.

In the urban children, the correlations between aggressive behavior and the results of achievement tests ranged from

-.07 to -.17 (see Table 51); all the correlations were negative, three out of six were significant. In the rural children, the correlations ranged from -.04 to -.16; here, only one was significant. Thus, it the results of the achievement tests are taken as the criterion of academic achievement, the hypothesis must be rejected.

The hypothesis is confirmed, however, when the Grade point average is taken as the criterion of academic achievement. The correlation between aggressive behavior and the Grade point average was -.28 in the urban children and -.30 in the rural children. The relationship is not strong yet it indicates that more aggressive pupils generally receive somewhat lower school marks than their less aggressive or unaggressive mates.

This means that in marking teachers do not consider only the pupils' knowledge but also their behavior. In this case, children's aggressive behavior affects their teachers in such a way that they give them slightly lower marks.

Hypothesis 24: There will be a negative relationship between restless behavior and academic achievement.

In the urban children, the correlations between restless behavior and the results of achievement tests were all negative and significant but very low; they ranged from -.12 to -.21 (see Table 51). The correlation with the Grade point average was higher, i.e. -.35. These results confirm the hypothesis.

The rural children's results, however, do not confirm the hypothesis entirely. Only one of six correlations, which were all negative and ranged from -.04 to -.15, was significant. The correlation between restlessness and the Grade point average, however, was significant and amounted to -.35.

In conclusion it can be stated that the correlation between children's restlessness and their academic achievement is negative but rather weak. Still,it seems that restless pupils are less successful in school which is not as noticeable in the achievement test results as it is in the teachers' marks. This difference indicates that the teachers' marking criteria are affected by the pupils' behavior so that restless children receive slightly lower marks.

Hypothesis 25: There will be a negative relationship between anxiety symptoms and academic achievement.

In the urban children, all the correlations between anxiety symptoms and the Achievement test scores were negative and significant but very low, ranging between -.14 and -.27. The correlation between anxiety symptoms and the Grade point average was -.30.These results confirm the hypothesis.

The rural children's results, however, do not confirm the hypothesis entirely. All six correlations were negative, ranging between -.10 and -.18 yet only three were significant. The correlation with the Grade point average, however, was negative and significant, amounting to -.25.

In conclusion it can be stated that there is a weak negative correlation between anxiety symptoms and academic achievement. Anxious children receive both lower scores in Achievement tests and lower school marks. We assume that an anxious child's performance in testing and in oral examinations does not reflect all his knowledge and abilities.

Hypothesis 26: There will be a negative relationship between neurotic symptoms and academic achievement.

In the urban children, all the correlations between neurotic symptoms and the Achievement test scores were negative and significant except for one. They ranged between -.10 and -.20 (see Table 51). The correlation between neurotic symptoms and the Grade point average was also negative and significant; it amounted to -.22. The hypothesis is confirmed.

The rural children's results, however, do not confirm the hypothesis entirely. All the correlations were negative yet out of six only one was significant. They ranged between -.04 and -.14 (see Table 52). The correlation between neurotic symptoms and the Grade point average was -.12 and not significant.

In conclusion it can be stated that urban children's academic achievement is slightly affected by their neurotic symptoms while in exceptional cases these effects can be serious. The rural children, on the other hand, are not subject to such influences.

Hypothesis 27: There will be a negative relationship between concern about social relations and academic achievement.

Both in urban and rural children, all the correlations between concern about social relations and criterion variables were negative but not significant. They ranged between -.01 and -.10 in the urban children and between -.02 and -.10 in the rural children (see Tables 51 in 52). The hypothesis is rejected.

Concern about social relations is obviously not related to academic achievement. As indicated, both more and less successful pupils can be concerned about social relations.

Hypothesis 28: There will be a negative relationship between psychosomatic troubles and academic achievement.

In both groups of children, the correlations between psychosomatic troubles and criterion variables of academic achievement were mostly negative and very low. In the urban children, they ranged between .00 and -.10; of seven correlations only two were significant. In the rural children, the correlations ranged between .02 and -.18; two were significant. The hypothesis is rejected.

The psychosomatic troubles of these children were not so serious as to hinder them in their work in school.

Hypothesis 29: There will be a negative relationship between concern about familial relations and academic achievement.

In the urban children, all the correlations between concern about familial relations and criterion variables of academic achievement were insignificant. They ranged from .01 to -.06 (see Table 51).

In the rural children, the correlations ranged from .07 to -.18 (see Table 52). All but one were negative; four of them were significant and three were not. Thus the hypothesis is not entirely confirmed.

The hypothesis is rejected although there was a certain relationship between concern about familial relations and academic achievement in the rural children. Generally speaking, however, this variable does not affect children's work in school.

Hypothesis 30: There will be a positive relationship between the father's occupation and academic achievement.

The hypothesis was checked for the urban children only; their fathers' occupations were so diverse as to range from the lowest to the highest grade on the occupational scale while the rural children's fathers did not differ very much regarding occupation since they were mostly peasants.

The correlations between the father's occupation and the Achievement test results ranged from .23 to .37 while the correlation with the Grade point average was .34. The hypothesis is entirely confirmed.

The children of fathers who stand higher on the occupational scale generally have higher scores in Achievement tests and receive higher school marks. The parents' occupation can therefore be considered one of the factors in the children's academic achievement. It is indicated in the direct help and encouragement that children get from their parents in the process of learning. Indirect effects are also present and are noticeable particularly in the children's aspirations and motivation for learning.

Hypothesis 31: There will be a negative relationship between the number of children in the family and academic achievement.

All the correlations between the number of children in the family and the variables of academic achievement were negative and ranged between -.02 and -.13 (see Table 51). In the urban children, only four out of seven correlations are thus significant.

In the rural children, these correlations were also negative and ranged between -.03 and -.20 (see Table 52). Only one was significant.

The hypothesis can not be accepted although a tendency supporting the hypothesis was expressed. However, the number of children in the family is not directly related to the academic achievement of urban and rural children.

Hypothesis 32: There will be a positive relationship between the living space index and academic achievement.

In the urban children, all the correlations were positive, ranging from .03 to .21 (see Table 51), but only four out of seven were significant.

In the rural children, the correlations ranged from .00 to .11 (see Table 52). None of them was significant.

The hypothesis is rejected; the living space index which describes the ratio between the number of rooms and members of the family, is not significantly and directly related with the academic achievement of children.

Hypothesis 33: There will be a positive relationship between co-operation of parents with school and academic achievement.

In the urban children the correlations between co-operation of parents with school and criterion variables of academic achievement ranged between .12 and .25 (see Table 51). All of them were positive and significant. All the correlations in rural children were positive and all but one significant.

They ranged from .12 to .33 (see Table 52). The hypothesis is confirmed.

The children of parents who cooperate with school more satisfactorily achieve better scores in achievement tests and also have higher school marks. This relationship is rather weak yet significant.

DIFFERENCES BETWEEN 4th AND 8th GRADE PUPILS WITH REGARD TO THE EFFECTS OF DEMO-GEOGRAPHIC AND SOCIO-ECONOMIC FACTORS

In the previous chapters we treated 4th and 8th grade pupils separately. Since the sample of 4th and 8th grade pupils was taken from the same schools and selected by means of the same criteria with regard to the socio-economic status and sex of the pupils, they can be compared with regard to certain demo-geographic and socio-economic factors. Here we are particularly interested to find out whether the differences in children's academic achievement and other personality characteristics decrease, remain or even increase during the years of schooling.

This comparison is based on a cross-section study. Because of the carefully selected sample and the sufficiently large number of pupils, this comparison can provide answers about the effects of demo-geographic and socio-economic factors on the academic achievement and personality characteristics of pupils with regard to their years of schooling. A longitudinal study following children from the 4th to the 8th grade of elementary school would provide even more reliable answers. Such a study, however, would take much more time since four years would have to elapse before the second testing which would also make the research quite expensive.

1. Differences between 4th and 8th grade pupils from large and small towns

4th grade pupils from large and small towns did not differ significantly in the results of achievement tests in Slovene language, Mathematics, Social studies and Natural sciences (see Table 53). It is interesting, however, that certain differences were observed in 8th grade pupils from large and small towns concerning linguistic subjects. Large town pupils (T-1) have a better knowledge of Slovene and English language than small town pupils (T-2 and T-3). As can be seen from Table 54, these differences are relatively small; they range from .25 SD to .36 SD. Nevertheless it can be concluded that large and culturally more developed towns provide pupils during the years of schooling with somewhat better chances for linguistic development than do small towns. Large town pupils have more chances to go to the theatre and other cultural events than small town pupils. These differences in linguistic achievement can partly also be a consequence of the better professional qualification of large town teachers. It is possible that teachers with a more adequate qualification demand and encourage the pupils more than do other teachers. In other subjects (Mathematics, History, Biology) no significant differences were found between 8th grade pupils from different size towns.

Generally speaking, there are no significant differences, or else relatively small ones, in the knowledge of pupils from large and small towns. No such differences appear during the years of schooling except in the linguistic field. This can be explained with our uniform curriculum elementary schools. Therefore the different levels of urbanization of towns could not figure very much in the children's knowledge as tested by objective tests. This picture is also confirmed by the children's school marks; among pupils from large and small towns there were no significant differences in the school marks in various school subjects either with 4th grade pupils or with 8th grade pupils.

The results indicate that children from large and small towns also have approximately equally developed intellectual abilities. Thus it can be stated that different levels of urbanization and the size of the town do not produce any differences in the intellectual development of children during the schooling period.

4th grade pupils from large towns displayed somewhat higher occupational aspirations than their age-mates from small towns. The mean differences range from .22 SD to .41 SD.

These differences are no longer observed in the 8th grade pupils. It is probable that pupils at an earlier stage of schooling are insufficiently acquainted with the demands of various occupations, and at the same time they are not yet able to realistically asses their capabilities. By the end of the 8th grade, however, they have had some experience in this respect and their occupational aspirations and expectations are closer to reality. No significant differences were observed in the educational aspirations of 4th and 8th grade pupils from large and small towns. It seems that occupational and educational aspirations are not essentially affected by the size and function of towns in which the child lives and goes to school.

Neither were there any significant differences between children from large and small towns in study habits and style of learning. Thus it can be stated that the different size of towns and different levels of urbanization have more or less the same effect on the forming of study habits and style of learning.

As to other personality characteristics, differences were found only between children from large towns (T-1) and small towns (T-3). As can be seen from Tables 53 and 54, differences are found mainly in 8th grade pupils while 4th grade pupils from different size towns differ only in neurotic symptoms - large town pupils display more of these than their small town age-mates. The mean difference amounts to .41 SD. Later, i.e. at the end of compulsory schooling, these differences disappear.

8th grade pupils from large towns displayed more restless behavior and more anxiety than their small town (T-3) age-mates. The differences, however, are not large; they amount to .30 SD and .29 SD. It is possible that the increase in restless behavior and anxiety from the 4th to the 8th grade in large towns is a consequence of greater demands in these schools. Therefore the pupils experience more school anxiety which in turn causes more restless behavior. At the same time it was found that 8th grade pupils from small towns T-3 are slightly more sociable than their large town age-mates. These differences, however, are again only small; they amount to .29 SD. As to other personality characteristics, no significant differences were found between children from large and small towns T-2 and small towns T-2 and T-3. This was the case with both 4th and 8th grade pupils.

Generally speaking, children from different size towns do not differ in their academic achievement and other personality characteristics or else they differ only slightly. No significant changes in this respect are observed during the years of schooling. Thus it can be stated that different levels of urbanization and the function of towns plays more or less the same role in school achievement and personality development of children from the 4th to the 8th grade of elementary school.

2. Differences between 4th and 8th grade pupils from semi-peasant and peasant areas and between children of semi-peasants and peasants

A comparison between pupils from semi-peasant and peasant areas indicates that certain differences emerge during the years of schooling. As can be seen from Table 55, 4th grade pupils from the two rural areas have approximately the same knowledge of the basic subjects except for Slovene where children from semi-peasant areas excel. The mean difference amounts to .31 SD. Significant differences are found, however, between 8th grade pupils from the two rural areas. Table 56 indicates that children from semi-peasant areas excel in reading, Mathematics, History and Biology. The mean differences are not large, ranging from .29 SD to .44 SD, yet they indicate certain changes in rural children towards the end of compulsory schooling. These differences are however not as large as to put children from semi-peasant areas in a considerably advantageous position with regard to further schooling.

This conclusion is also supported by 8th grade pupils' school marks. There are no significant differences between the pupils from the two rural areas except in Mathematics where pupils from peasant areas gained higher marks, the mean difference being .28 SD. Generally speaking, 4th grade pupils from the two rural areas do not differ in the school marks, either.

The two groups of rural children do not differ in intellectual abilities and style of learning which is the case with both 4th and 8th grade pupils. This is probably one of the reasons why these two groups of rural children differ so little, or not at all, in their academic achievement.

4th grade pupils from semi-peasant and peasant areas do not differ in occupational and educational aspirations while on the other hand they differ in occupational expectations. The mean difference is .28 SD. 8th grade pupils provide a similar picture; the differences however, are large. Semi-peasant children have higher occupational aspirations and expectations than their peasant age-mates. The mean differences are .38 SD and .47 SD. They do not differ, however, in educational aspirations. Thus it can be stated that during the years of schooling, the differences in occupational aspirations and expectations between children from semi-peasant and peasant areas slightly increase.

4th grade pupils from the two rural areas do not differ significantly in study habits while 8th grade pupils from semi-peasant areas proved to have somewhat better study habits than their age-mates from peasant areas. These differences, however, are small; they amount to .28 SD.

No significant differences between the two rural groups were found in sociability, aggression, restlessness, anxiety and neurotic symptoms. This was the case with both 4th and 8th grade pupils.

Tables 55 and 56 also present a comparison between children of semi-peasants and peasants from both rural areas. It is very interesting that children of semi-peasant and peasant families do not differ in their academic achievement if it is determined by means of their achievement tests results and school marks. Neither do they differ in intellectual abilities, occupational and educational aspirations, study habits, style of learning and other personality characteristics. This is the case with both 4th and 8th grade pupils. These children all live in a rural environment which is quite homogeneous with regard to its social, cultural and other effects. Therefore it is our belief that we found no differences in the academic achievement and other personality characteristics between children of semi-peasant and peasant parents during the years of schooling.

3. Differences between 4th and 8th grade pupils with regard to urban and rural environments

For this particular comparison, the urban sample consisted only of unqualified and qualified workers' children. Their parents can be compared, with regard to education and work, to peasants and workers in the country. A comparison of rural and unqualified town workers' children will be presented first, followed by a comparison of rural and qualified town workers' children.

a) Differences between unqualified town workers' children and rural children

Unqualified town workers' children did better in the achievement tests than their rural age-mates. The differences range from .47 SD to .85 SD in the case of 4th grade pupils, and from .48 SD to 1.01 SD in the case of 8th grade pupils. As can be seen from Tables 57 and 58, differences between these two groups increased in reading achievement and other subjects except for Slovene where they remained the same. The differences between urban and rural children increased most in Mathematics. They also increased in reading achievement. This indicates that rural children at the end of compulsory schooling are quite behind their urban age-mates as far as knowledge is concerned. This shortcoming is most obvious in reading (vocabulary and reading comprehension) and Mathematics. Rural children read less and have in general fewer chances to improve their vocabulary and other linguistic knowledge than this group of urban children. Rural parents also cannot help their children with their homework, particularly in the higher grades of elementary school, because they lack adequate knowledge. This is particularly obvious in the case of Mathematics where their children would most of all need some help as the educational programmes are quite demanding.

If academic achievement is evaluated on the basis of teacher-assigned marks, an opposite picture is obtained. Tables 57 and 58 indicate that rural children have a higher Grade point average than those of unqualified town workers. The mean differences amount to .33 SD in the 4th grade pupils and .26 SD in the 8th grade pupils. Thus it is obvious that school marks do not give a realistic picture of rural and urban children's knowledge and skills.

Rural children scored lower on the non-verbal intelligence test than unqualified town workers' children. Differences between these two groups are more or less the same for 4th and 8th grade pupils; they amount to .63 SD and .66 SD. This indicates that differences in intelligence do not decrease by the end of compulsory schooling but they remain the same. It is obvious that due to the unstimulating rural environment, rural children do not succeed in compensating for this shortcoming during the years of compulsory schooling.

Rural children also have lower occupational and educational aspirations than unqualified town workers' children. These differences range between .35 SD and .58 SD in the 4th grade pupils and between .39 SD and .46 SD in the 8th grade pupils. As can be seen, the difference did not decrease to any noteworthy extent but they remained approximately the same.

There are no significant differences between unqualified town workers' children and rural children in study habits. This is the case with both 4th and 8th grade pupils. Concerning their style of learning, a difference between these two groups was found only in 4th grade pupils; it amounted to .42 SD. Here it is surprising that rural children excel over the urban children. In the 8th grade, however, these differences disappear. Since this groups of children is more successful in school we expected that they would also have a better style of learning. We are certain that the difference mentioned is a result of too favourable an evaluation of rural children's style of learning.

There were significant differences between these two groups in sociability. 4th and 8th grade rural children are somewhat more sociable than unqualified town workers' children. These differences amount to .35 SD in 4th grade pupils and .27 SD in 8th grade pupils. These differences are small and stable till the end of compulsory schooling. As to other personality characteristics, no significant differences were found between these two groups except for neurotic symptoms in 4th grade pupils where the difference amounts to .28 SD. Unqualified town workers' children displayed some more neurotic symptoms than their rural age-mates. These differences are no longer found in the 8th grade pupils.

b) Differences between qualified town workers' children and rural children

Differences in the knowledge of school subjects between qualified town workers' children and their rural age-mates are rather large. The largest difference between these two groups is in reading achievement; it amounts to 1.10 SD in 4th grade pupils and 1.15 SD in 8th grade pupils. As can be seen, the differences did not decrease by the end of elementary schooling but they remained practically the same. Tables 57 and 58 indicate that qualified town workers' children obtained considerably better scores in other school subjects as well. These differences range between .53 SD and .84 SD in 4th grade pupils, and between .55 SD and .95 SD in 8th grade pupils. By the end of compulsory schooling the differences increased particularly in Mathematics, History and Biology. The only exception is Slovene language where the differences between urban and rural 8th grade pupils slightly decreased if compared to those between urban and rural 4th grade pupils.

This comparison indicates that at the end of elementary schooling rural children do rather worse in various school subjects than qualified town workers' children. During the years of compulsory schooling the differences do not decrease - they even tend to increase slightly. Thus it can be stated that rural children, even though attending nationally uniform schools, cannot in this time compensate for their shortcomings in knowledge and skills. As mentioned before, their parents cannot help them in the higher grades of elementary school.

The school marks provide a different picture. 4th grade pupils from families of qualified town workers have slightly higher average marks in Slovene and Social studies than their rural age-mates. The mean differences amount to .36 SD and .30 SD. There are no differences between them in Mathematics and Natural sciences, however, 8th grade rural pupils have exactly the same mean marks in all school subjects as their urban age-mates. Achievement test results indicated, however, that the differences in the knowledge and skills between these two groups even slightly increased during the years of schooling and are by the end of elementary school rather large. This indicates that village teachers mark their pupils very favourably, which is particularly frequent at the end of the school year.

Differences between these two groups also appear in intellectual abilities. Qualified town workers' children excel considerably over their rural age-mates. The mean difference is .89 SD in 4th grade pupils and .84 SD in 8th grade pupils. As can be seen, differences in intelligence between these two groups remain approximately the same during the years of schooling.

Rural children have lower occupational and educational aspirations than this group of urban children. These differences range from .61 SD to .84 SD in 4th grade pupils and from .68 SD to .84 SD in 8th grade pupils. This means that differences in aspirations between these two groups do not change during the years of schooling and remain approximately the same from the 4th grade onward.

Qualified town workers' children also have somewhat better study habits than their rural age-mates. This difference amounts to .57 SD in 4th grade pupils and .22 SD in 8th grade pupils. Thus it can be seen that the differences decreased which is not surprising considering that study habits are formed gradually during the years of schooling with regard to the increasing demands of schools.

No significant differences were found in the style of learning of these two groups although they could have been expected considering the differences in their knowledge and abilities. This was probably brought about by the fact that village teachers gave too favourable an evaluation of their pupils' style of learning.

No significant differences between urban and rural children from the 4th and 8th grades were found in sociability, aggression or anxiety. Slight differences occurred in 4th grade pupils concerning neurotic symptoms yet they later disappeared. Slight differences concerning restlessness were found in 8th grade pupils; they amount to .24 SD. In general it could be stated that urban and rural children do not differ with regard to the personality characteristics mentioned and that differences do not appear in the course of schooling, either.

4. Differences between 4th and 8th grade pupils with regard to the socio-economic status of the family

For the sake of clarity, differences between professional and unqualified workers' children will be discussed first, followed by those between professional and qualified workers' children and those between qualified and unqualified workers' children.

a) Differences between professional and unqualified workers' children

Professional workers' children displayed better knowledge in achievement tests than did unqualified workers' children.

In 4th grade pupils these differences are quite large in all the subjects; they range from .90 SD to 1.05 SD (see Table 59). Rather large differences were also found in 8th grade pupils. Professional workers' children excel in all the subjects over unqualified workers' children; the mean differences range from .60 SD to .82 SD (see Table 60). Thus it is evident that the differences in the knowledge of school subjects between these two SES groups decreased a little during the time from the 4th grade to the 8th grade.

It is our belief that the decrease in these differences was brought about by the fact that the 8th grade sample did not cover those children who failed in school, i.e. those who did not progress regularly from grade to grade. In the school year 1972/73, i.e. in the year when the testing was carried out, the dropout was .5% up to the 4th grade while the total dropout, the 8th grade included, was 27.4%. Among the children who failed, the largest number took the 6th and 7th grade again.

This is probably the main reason why the differences in knowledge and skills between professional and unqualified workers' children are smaller in the 8th grade than in the 4th grade where children practically do not yet fail. Taking these facts into account one comes to the conclusion that the differences in the knowledge of school subjects between these two groups which are farthest apart with regard to SES do not vary to any noteworthy extent during the years of compulsory schooling but remain very much the same.

The school mark differences between these two SES groups are larger still. In 4th grade pupils they are very large, ranging from 1.10 SD to 1.21 SD. In 8th grade pupils these differences range from .82 SD to .96 SD. Obviously, the differences decreased by the time the children reached the 8th grade. The reason for this decrease is the same as described earlier.

Professional workers' children have more developed intellectual abilities than unqualified workers' children. In 4th grade pupils this difference amounts to .79 SD while in 8th grade pupils it amounts to .65 SD. The differences probably decreased because less capable children from families of unqualified workers' children failed in school. Therefore the differences in academic achievement of these two groups of pupils slightly decreased by the end of elementary schooling.

An interesting picture is obtained by comparing occupational and educational aspirations. Professional workers' children have higher aspirations than unqualified workers' children. In 4th grade pupils these differences range from .64 SD to .69 SD, while in 8th grade pupils they range from 1.11 SD to 1.28 SD. As can be seen, aspiration differences increased very much in the period from the 4th grade to the 8th grade. The differences in intellectual abilities, on the other hand, decreased slightly by the end of elementary schooling.

Thus it can be stated that social differentiation is most evident in occupational and educational aspirations, i.e. in the field of the child's motivation. Towards the end of elementary schooling the "scissors" open even more - professional workers' children develop still higher occupational and educational aspirations while those of unqualified workers' children grow lower. Among unqualified workers' children there are quite a few pupils who want to get a job as soon as possible although many of them may have both an adequate knowledge and suitably developed abilities to continue schooling and obtain a more demanding occupation. And vice versa - many a child of professional workers will be encouraged by his parents to study without regard to his actual abilities for obtaining further education.

Professional workers' children also have better study habits and style of learning than unqualified workers' children. The mean differences in study habits amount to .67 SD in the 4th grade pupils and .66 SD in the 8th grade pupils. Thus it can be stated that study habits do not change much during the years of schooling. Somewhat large are the differences in style of learning. In 4th grade pupils they amount to 1.09 SD, while in 8th grade pupils they amount to .75 SD. At the end of schooling these differences decreased although they are still quite large.

The effects of social and familial environments are also manifested in the children's sociability. Professional workers' children are on average more sociable than unqualified workers' children. The difference amounts to .82 SD in 4th grade pupils and .56 SD in 8th grade pupils. As can be seen, the differences in sociability between these two groups gradually decrease yet they still remain fairly large until the end of schooling. The school and education make a contribution towards lessening these differences which cannot, however, be completely erased because of the influence of the familial environment.

Professional workers' children displayed less anxiety than unqualified workers' children. The mean difference amounts to .47 SD in 4th grade pupils and .53 SD in 8th grade pupils. As can be seen, differences in anxiety do not change considerably during the years of schooling. School anxiety does not depend so much on the SES of the family as on the demands of school and on the children's academic achievement.

As to aggression, the only differences between these two groups were found in 4th grade pupils. Unqualified workers' children displayed more aggressive behavior than professional workers' children yet the differences between them are comparatively small, amounting to .32 SD. They are no longer found in 8th grade pupils. This indicates that children during the years of schooling gradually learn more suitable forms of behavior and become more socialized.

No significant differences between these two groups were found in restlessness and neurotic symptoms in either 4th grade or 8th grade pupils. In general it can be stated that differences in personality characteristics between these two groups are small or they do not exist at all while those in their academic achievement, intellectual abilities and motivation variables are rather large.

b) Differences between professional and qualified workers' children

Professional workers' children excel in the knowledge of school subjects over qualified workers' children as well. In 4th grade pupils the mean differences in achievement tests range from .57 SD to .69 SD, while in 8th grade pupils they range from .40 SD to .68 SD (see Tables 59 and 60). This indicates that differences in knowledge and skills between these two groups do not change from the 4th to the 8th grade but remain more or less the same. Thus it can be stated that the effects of the socio-economic and cultural environment on children's academic achievement are approximately the same in the 4th grade and at the end of compulsory schooling.

Professional workers' children excel in intellectual abilities as well. The mean difference between these two groups is .47 SD in 4th grade pupils and .57 SD in 8th grade pupils. These differences are moderate and remain more or less the same from the 4th grade to the end of compulsory schooling. It is interesting, however, that the differences in intellectual abilities between these two SES groups are smaller than those in their academic achievement and motivation variables.

It can also be noted in this comparison that the differences in occupational and educational aspirations between these two groups increase during the years of schooling. In 4th grade pupils these differences range from .40 SD to .49 SD, while in 8th grade pupils they range from .82 SD to .96 SD. This comparison also indicates that the effects of social differentiation are the strongest in occupational and educational aspirations. The results reveal that during the years of schooling these aspirations grow higher in professional workers' children while in qualified workers' children occupational aspirations remain more or less the same, while educational aspirations grow somewhat lower. If their knowledge and abilities are considered, many more qualified workers' children could continue schooling and acquire more demanding occupations if they were not hindered by their too low aspirations.

These two groups of children also differ in study habits and style of learning. Professional workers' children excel over qualified workers' children in this respect as well. In 4th grade pupils, the mean differences are .28 SD in study habits and .66 SD in style of learning. In 8th grade pupils these differences increased slightly and they amount to .44 SD in study habits and .72 SD in style of learning. Study habits and style of learning are influenced by the familial environment and also by the school which the child attends but the school cannot quite manage to lessen these differences so that workers' children could do still better in school.

Professional workers' children also excel in sociability. In 4th grade pupils these differences amount to .42 SD, and in 8th grade pupils they amount to .35 SD. As can be seen, the differences between these two groups remain more or less the same and do not change much during the years of schooling. It should be noted, though, that they are rather small.

Professional workers' children also display less anxiety than qualified workers' children. In 4th grade pupils these differences are small; they amount to .24 SD. In 8th grade pupils, however, these differences are considerably larger, amounting to .47 SD. It can be seen that anxiety in children from workers' families increases towards the end of compulsory schooling which can be explained if we consider the greater demands of the school and the problems in connection with the children's careers.

There are no significant differences between these two SES groups in aggression, restlessness or neurotic symptoms. This is the case with both 4th and 8th grade pupils. Here it can be concluded that differences in personality characteristics between professional and qualified workers' children are relatively small or they do not exist at all. They are considerably larger, however, in academic achievement, intellectual abilities and motivation factors.

c) *Differences between qualified and unqualified workers' children*

This is a comparison of the results of two groups of children who are quite close with regard to SES. Therefore we expected that the differences in the variables examined would be smaller.

In 4th grade pupils there were significant differences in knowledge and skills. Qualified workers' children did better both in the reading test and in achievement tests in school subjects. These differences range from .26 SD to .48 SD. In 8th grade pupils, differences were found only in reading achievement and History. These differences are small; they amount to .23 SD and .27 SD. There are no significant differences between them in other school subjects. This indicates that the differences in knowledge decreased towards the end of compulsory schooling and are in the majority of subjects no longer found. This happened mainly because our 8th grade sample did not cover those unqualified workers' children who had failed earlier. Therefore the less successful pupils are not represented in this comparison. Considering this fact it is impossible to be sure that the differences in knowledge between these two groups decrease or even completely dissapeear.

The school mark differences between these two groups of 4th grade pupils are larger than those in achievement tests. The average school mark differences range from .48 SD to .57 SD. They are no longer found in 8th grade pupils except for Slovene language where they amount to .25 SD. Thus, the school mark differences decreased in a similar way to those in achievement tests, and are practically not-existent.

There is a similar picture in intellectual abilities. As to 4th grade pupils, qualified workers' children excel over their age-mates from families of unqualified workers yet this difference is not large; it amounts to .34 SD. These differences are no longer found in 8th grade pupils. Our explanation is that less able pupils, particularly from families of unqualified workers, had failed earlier.

Qualified workers' children have decidedly higher occupational and educational aspirations than unqualified workers' children. In 4th grade pupils these differences are small, ranging from .20 SD to .24 SD. These differences are larger in 8th grade pupils; they range from .28 SD to .43 SD. It can be seen that the differences in aspirations between these two groups increased at the end of compulsory schooling. This phenomenon was also observed in the comparisons of other SES groups and has been interpreted. The same interpretation is valid for this case.

Differences between qualified and unqualified workers' children are observed in study habits as well. The former excel over the latter in this respect. The differences amount to .42 SD in 4th grade pupils and .27 SD in 8th grade pupils. These differences are not large and they decreased towards the end of compulsory schooling. Nevertheless they indicate that the social and cultural factors associated with the family play an important role in the development of children's study habits.

As to style of learning, a difference between these two groups is found only in 4th grade pupils where it amounts to .49 SD. In 8th grade pupils this difference is no longer found.

There is also a difference between these two groups in sociability. Qualified workers' children again excel over unqualified workers' children yet the differences are not large. In 4th grade pupils they amount to .37 SD, while in 8th grade pupils they amount to .23 SD.

As to anxiety, differences are found only in 4th grade pupils. More anxiety is displayed by unqualified workers' children. The mean difference amounts to .23 SD. As can be seen, the difference is small while in 8th grade pupils it no longer exists. In aggression, restlessness and neurotic symptoms there were no significant differences between these two groups either in 4th grade or in 8th grade pupils.

In conclusion it can be stated that differences in academic achievement, intellectual abilities and personality characteristics between qualified and unqualified workers' children decrease towards the end of compulsory schooling in such a way that they are practically very small or non-existent. In motivation variables, however, the effects of the social and cultural environment are evident; these differences increase during the years of schooling.

5. Differences between 4th and 8th grade pupils with regard to the sex

There were differences between the sexes in achievement test results. In the 4th grade, boys excel over girls in Mathematics, Social Studies and Natural Sciences. The mean differences are not large, ranging from .18 SD and .28 SD. In reading achievement and Slovene language there are no significant differences between them. In the 8th grade, however, the differences are found in linguistic subjects where girls excel. Yet these differences are not large, they amount to .37 SD in Slovene language and .20 SD in English language. In other subjects there are no significant differences between the sexes. Generally speaking, the differences in knowledge and skills between boys and girls are small or non-existent in both 4th and 8th grade. A tendency is observed that girls towards the end of compulsory schooling, i.e. in early adolescence, show more interest in linguistic subjects in which they also excel over boys.

The school marks, however, provide a different picture. In the 4th grade girls received higher mean marks in Slovene language than boys. The mean difference amounts to .36 SD. In the other three subjects there are no significant differences between the sexes regarding school marks although girls obtain lower scores on achievement tests. This means that girls in the 4th grade are given generally higher marks than boys. This tendency is observed also in the 8th grade; in all the subjects but History girls received higher marks than boys. The mean differences range from .25 SD to .63 SD. Here it can be seen that girls are given higher marks not only in the lower but also in the higher grades of elementary school.

There were no significant differences in intellectual abilities between boys and girls in the 4th grade. In the 8th grade, however, boys obtained higher scores than girls. The difference is small; it amounts to .24 SD.

Neither do the sexes differ significantly in aspirations. In the 4th grade, boys expressed somewhat higher occupational aspirations and expectations than girls. The differences amount to .21 SD and .18 SD. As can be seen, these differences are small. They are no longer found in 8th grade pupils. In educational aspirations, there are no significant differences between the sexes either in 4th or in 8th grade pupils. In can concluded that at the end of compulsory schooling the sexes generally do not differ in the aspiration level.

Naither were there any significant differences between the sexes in style of learning. This is the case with both 4th and 8th grade pupils. There are, however, some differences in study habits. Girls have in general somewhat better study habits than boys. The difference is .36 SD in the 4th grade and .25 SD in the 8th grade. These differences re not large but they are evident not only in the lower but also in the higher grades of elementary school.

Small differences between the sexes were also found in the sociability of 8th grade pupils; they amount to .30 SD. Larger and more persistent differences between the sexes are found in aggression and restlessness. Boys are generally more aggressive and restless than girls. In the 4th grade these differences amount to .79 SD and .81 SD while in the 8th grade they amount to .91 SD and .58 SD. Thus it can be seen that boys are more aggressive and restless not only in childhood but also in early adolescence.

Small but persistent differences between the sexes are observed in anxiety as well. Girls are in general more anxious than boys. The differences amount to .31 SD in the 4th grade and .27 SD in the 8th grade. No significant differences between the sexes were found in neurotic symptoms either in the 4th or in the 8th grade.

In conclusion it can be stated that differences between the sexes are very small or they do not exist at all. Larger differences are found only in the school marks where girls seem to be in a favoured position. In personality characteristics, rather large differences are found only in aggression and restlessness. During the years of schooling boys display more aggressive and restless behavior than girls.

TABLE 53: Differences between children from large (T-1) and small towns (T-2 and T-3).
Results of 4th grade pupils

VARIABLES	T-1 x T-3	*	T-1 x T-2	*	T-2 x T-3
Achievement tests:					
Reading achievement	T-1 > T-3	.32	T-1 = T-2		T-2 = T-3
Slovene language	T-1 = T-3		T-1 = T-2		T-2 = T-3
Mathematics	T-1 = T-3		T-1 = T-2		T-2 = T-3
Social Studies	T-1 = T-3		T-1 = T-2		T-2 = T-3
Natural Sciences	T-1 = T-3		T-1 = T-2		T-2 = T-3
School marks:					
Slovene language	T-1 = T-3		T-1 = T-2		T-2 = T-3
Mathematics	T-1 = T-3		T-1 = T-2		T-2 = T-3
Social Studies	T-1 = T-3		T-1 = T-2		T-2 = T-3
Natural Sciences	T-1 < T-3	.28	T-1 = T-2		T-2 = T-3
Grade point average	T-1 = T-3		T-1 = T-2		T-2 = T-3
Intelligence test	T-1 = T-3		T-1 = T-2		T-2 = T-3
Occupat.aspirations	T-1 > T-3	.38	T-1 > T-2	.22	T-2 = T-3
Occupat.expectations	T-1 > T-3	.41	T-1 > T-2	.28	T-2 = T-3
Educat. aspirations	T-1 = T-3		T-1 = T-2		T-2 = T-3
Study habits	T-1 = T-3		T-1 = T-2		T-2 = T-3
Style of learning	T-1 = T-3		T-1 = T-2		T-2 = T-3
Social behavior	T-1 = T-3		T-1 = T-2		T-2 = T-3
Aggressive behavior	T-1 = T-3		T-1 = T-2		T-2 = T-3
Restless behavior	T-1 = T-3		T-1 = T-2		T-2 = T-3
Anxiety symptoms	T-1 = T-3		T-1 = T-2		T-2 = T-3
Neurotic symptoms	T-1 > T-3	.41	T-1 = T-2		T-2 = T-3

*Statistically significant difference between the arithmetical means in standard deviation units.

TABLE 54: Differences between children from large (T-1) and small towns (T-2 and T-3).
Results of 8^{th} grade pupils

VARIABLES	T-1 x T-3	*	T-1 x T-2	*	T-2 x T-3	*
Achievement tests:						
Reading achievement	T-1 = T-3		T-1 > T-2	.29	T-2 < T-3	.22
Slovene language	T-1 > T-3	.25	T-1 > T-2	.25	T-2 = T-3	
Mathematics	T-1 = T-3		T-1 = T-2		T-2 = T-3	
English language	T-1 > T-3	.34	T-1 > T-2	.36	T-2 = T-3	
History	T-1 = T-3		T-1 = T-2		T-2 = T-3	
Biology	T-1 = T-3		T-1 = T-2		T-2 = T-3	
School marks:						
Slovene language	T-1 = T-3		T-1 = T-2		T-2 = T-3	
Mathematics	T-1 = T-3		T-1 = T-2		T-2 = T-3	
English language	T-1 = T-3		T-1 = T-2		T-2 = T-3	
History	T-1 = T-3		T-1 = T-2		T-2 = T-3	
Biology	T-1 = T-3		T-1 = T-2		T-2 = T-3	
Grade point average	T-1 = T-3		T-1 = T-2		T-2 = T-3	
Intelligence test	T-1 = T-3		T-1 = T-2		T-2 = T-3	
Occupat.aspirations	T-1 = T-3		T-1 = T-2		T-2 = T-3	
Occupat.expectations	T-1 = T-3		T-1 = T-2		T-2 = T-3	
Educational aspirat.	T-1 = T-3		T-1 = T-2		T-2 = T-3	
Study habits:						
total	T-1 = T-3		T-1 = T-2		T-2 < T-3	.28
Homework schedules	T-1 = T-3		T-1 = T-2		T-2 = T-3	
Methods and techn. of learning	T-1 = T-3		T-1 = T-2		T-2 = T-3	
Coping with problems in learning	T-1 = T-3		T-1 = T-2		T-2 = T-3	
Self-confidence	T-1 = T-3		T-1 = T-2		T-2 = T-3	
Style of learning	T-1 = T-3		T-1 = T-2		T-2 = T-3	
Social behavior	T-1 < T-3	.29	T-1 = T-2		T-2 = T-3	
Aggressive behavior	T-1 = T-3		T-1 = T-2		T-2 = T-3	
Restless behavior	T-1 > T-3	.30	T-1 = T-2		T-2 = T-3	
Anxiety symptoms	T-1 > T-3	.29	T-1 = T-2		T-2 = T-3	
Neurotic symptoms	T-1 = T-3		T-1 = T-2		T-2 = T-3	
Concern about social relations	T-1 < T-3	.29	T-1 = T-2		T-2 < T-3	.23
Psychosomatic troubles	T-1 = T-3		T-1 = T-2		T-2 = T-3	

*Statistically significant difference between the arithmetical means in standard deviation units.

TABLE 55: Differences between children from semi-peasant (R-1) and peasant areas (R-2) and between children of semi-peasants (SP) and peasants (PP). Results of 4th grade pupils

VARIABLES	R-1 x R-2	*	SP x PP	*
Achievement tests:				
Reading achievement	R-1 = R-2		SP = PP	
Slovene language	R-1 > R-2	.31	SP = PP	
Mathematics	R-1 = R-2		SP = PP	
Social Studies	R-1 = P-2		SP = PP	
Natural Sciences	R-1 = R-2		SP = PP	
School marks:				
Slovene language	R-1 = R-2		SP = PP	
Mathematics	R-1 = R-2		SP = PP	
Social Studies	R-1 = R-2		SP = PP	
Natural Studies	R-1 = R-2		SP = PP	
Grade point average	R-1 = R-2		SP = PP	
Intelligence test	R-1 = R-2		SP = PP	
Occupational aspirations	R-1 = R-2		SP = PP	
Occupational expectations	R-1 > R-2	.28	SP < PP	.35
Educational aspirations	R-1 = R-2		SP = PP	
Study habits	R-1 = R-2		SP = PP	
Style of learning	R-1 = R-2		SP = PP	
Social behavior	R-1 = R-2		SP = PP	
Aggressive behavior	R-1 = R-2		SP = PP	
Restless behavior	R-1 = R-2		SP = PP	
Anxiety symptoms	R-1 = R-2		SP = PP	
Neurotic symptoms	R-1 = R-2		SP = PP	

*Statistically significant difference between the arithmetical means in standard deviation units.

TABLE 56: Differences between children from semi-peasant (R-1) and peasant areas (R-2) and between children of semi-peasants (SP) and peasants (PP).
Results of 8th grade pupils

VARIABLES	R-1 x R-2	*	SP x PP
Achievement tests:			
Reading achievement	R-1 > R-2	.29	SP = PP
Slovene language	R-1 = R-2		SP = PP
Mathematics	R-1 > R-2	.32	SP = PP
English language	R-1 = R-2		SP = PP
History	R-1 > R-2	.44	SP = PP
Biology	R-1 > R-2	.33	SP = PP
School marks:			
Slovene language	R-1 = R-2		SP = PP
Mathematics	R-1 < R-2	.28	SP = PP
English language	R-1 = R-2		SP = PP
History	R-1 = R-2		SP = PP
Biology	R-1 = R-2		SP = PP
Grade point average	R-1 = R-2		SP = PP
Intelligence test	R-1 = R-2		SP = PP
Occupational aspirations	R-1 > R-2	.38	SP = PP
Occupational expectations	R-1 > R-2	.47	SP = PP
Educational aspirations	R-1 = R-2		SP = PP
Study habits:			
total	R-1 > R-2	.28	SP = PP
Homework schedules	R-1 > R-2	.26	
Methods and techn. of learning	R-1 = R-2		SP = PP
Coping with problems in learning	R-1 = R-2		SP = PP
Self-confidence	R-1 = R-2		SP = PP
Style of learning	R-1 = R-2		SP = PP
Social behavior	R-1 = R-2		SP = PP
Aggressive behavior	R-1 = R-2		SP = PP
Restless behavior	R-1 = R-2		SP = PP
Anxiety symptoms	R-1 = R-2		SP = PP
Neurotic symptoms	R-1 = R-2		SP = PP
Concern about social relations	R-1 = R-2		SP = PP
Psychosomatic troubles	R-1 = R-2		SP = PP

*Statistically significant difference between the arithmetical means in standard deviation units.

TABLE 57: Differences between rural children (R), children of qualified town workers (Q) and children of unqualified town workers (U).
Results of 4th grade pupils

VARIABLES	U x R	*	Q x R	*
Achievement tests:				
Reading achievement	U > R	.85	Q > R	1.10
Slovene language	U > R	.50	Q > R	.84
Mathematics	U > R	.47	Q > R	.84
Social Studies	U > R	.51	Q > R	.75
Natural Sciences	U = R		Q > R	.53
School marks:				
Slovene language	U < R	.22	Q > R	.36
Mathematics	U < R	.37	Q = R	
Social Studies	U = R		Q > R	.30
Natural Sciences	U < R	.36	Q = R	
Grade point average	U < R	.33	Q > R	.29
Intelligence test	U > R	.63	Q > R	.89
Occupational aspirations	U > R	.45	Q > R	.68
Occupational expectations	U > R	.35	Q > R	.61
Educational aspirations	U > R	.58	Q > R	.84
Study habits	U = R		Q > R	.57
Style of learning	U < R	.42	Q = R	
Social behavior	U < R	.35	Q = R	
Aggressive behavior	U = R		Q = R	
Restless behavior	U = R		Q = R	
Anxiety symptoms	U = R		Q = R	
Neurotic symptoms	U > R	.28	Q > R	.23

*Statistically significant difference between the arithmetical means in standard deviation units.

TABLE 58: Differences between rural children (R), children of qualified town workers (Q) and children of unqualified town workers (U).
Results of 8th grade pupils

VARIABLES	U x R	*	Q x R	*
Achievement tests:				
Reading achievement	U > R	1.01	Q > R	1.15
Slovene language	U > R	.48	Q > R	.55
Mathematics	U > R	.87	Q > R	.95
English language	U > R	.49	Q > R	.68
History	U > R	.62	Q > R	.84
Biology	U > R	.76	Q > R	.94
School marks:				
Slovene language	U < R	.29	Q = R	
Mathematics	U = R		Q = R	
English language	U = R		Q = R	
History	U = R		Q = R	
Biology	U < R	.22	Q = R	
Grade point average	U < R	.26	Q = R	
Intelligence test	U > R	.66	Q > R	.84
Occupational aspirations	U > R	.39	Q > R	.68
Occupational expectations	U > R	.46	Q > R	.81
Educational aspirations	U > R	.42	Q > R	.84
Study habits:				
total	U = R		Q > R	.22
Homework schedules	U = R		Q = R	
Methods and techn. of learning	U < R	.24	Q = R	
Coping with problems in learning	U = R		Q > R	.21
Self-confidence	U = R		Q = R	
Style of learning	U = R		Q = R	
Social behavior	U < R	.27	Q = R	
Aggressive behavior	U = R		Q = R	
Restless behavior	U = R		Q > R	.24
Anxiety symptoms	U = R		Q = R	
Neurotic symptoms	U = R		Q = R	
Concern about social relations	U < R	.21	Q < R	.35
Psychosomatic troubles	U < R	.25	Q < R	.39

*Statistically significanct difference between the arithmetical means in standard deviation units.

TABLE 59: Differences between children with regard to socio-economic status.
Results of 4th gradè pupils

	S E S					
VARIABLES	P x U	*	P x Q	*	Q x U	*
Achievement tests:						
Reading achievement	P > U	.91	P > Q	.59	Q > U	.38
Slovene language	P > U	1.05	P > Q	.64	Q > U	.43
Mathematics	P > U	.98	P > Q	.57	Q > U	.48
Social Studies	P > U	.90	P > Q	.69	Q > U	.27
Natural Sciences	P > U	.92	P > Q	.59	Q > U	.26
School marks:						
Slovene language	P > U	1.13	P > Q	.69	Q > U	.57
Mathematics	P > U	1.18	P > Q	.67	Q > U	.57
Social Studies	P > U	1.11	P > Q	.73	Q > U	.48
Natural Sciences	P > U	1.10	P > Q	.66	Q > U	.51
Grade point average	P > U	1.21	P > Q	.73	Q > U	.59
Intelligence test	P > U	.79	P > Q	.47	Q > U	.34
Occupat.aspirations	P > U	.69	P > Q	.49	Q > U	.22
Occupat.expectations	P > U	.65	P > Q	.44	Q > U	.24
Educat.aspirations	P > U	.64	P > Q	.40	Q > U	.20
Study habits	P > U	.67	P > Q	.28	Q > U	.42
Style of learning	P > U	1.09	P > Q	.28	Q > U	.49
Social behavior	P > U	.82	P > Q	.42	Q > U	.37
Aggressive behavior	P < U	.32	P = Q		Q = U	
Restless behavior	P = U		P = Q		Q = U	
Anxiety symptoms	P < U	.47	P < Q	.24	Q < U	.23
Neurotic symptoms	P = U		P = Q		Q = U	

P = professional workers' children
Q = qualified workers' children
U = unqualified workers' children

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*Statistically significant difference between the arithmetical means in standard deviation units.

TABLE 60: Differences between children with regard to socio-economic status.
Results of 8th grade pupils

VARIABLES			S E S			
	P x U	*	P x Q	*	Q x U	*
Achievement tests:						
Reading achievement	P > U	.68	P > Q	.49	Q > U	.23
Slovene language	P > U	.72	P > Q	.61	Q = U	
Mathematics	P > U	.68	P > Q	.59	Q = U	
English language	P > U	.82	P > Q	.68	Q = U	
History	P > U	.64	P > Q	.40	Q > U	.27
Biology	P > U	.60	P > Q	.49	Q = U	
School marks:						
Slovene language	P > U	.84	P > Q	.64	Q > U	.25
Mathematics	P > U	.87	P > Q	.75	Q = U	
English language	P > U	.82	P > Q	.74	Q = U	
History	P > U	.88	P > Q	.73	Q = U	
Biology	P > U	.90	P > Q	.70	Q = U	
Grade point average	P > U	.96	P > Q	.77	Q > U	.23
Intelligence test	P > U	.65	P > Q	.57	Q = U	
Occupat.aspirations	P > U	1.11	P > Q	.82	Q > U	.28
Occupat.expectations	P > U	1.21	P > Q	.90	Q > U	.41
Educational aspirations	P > U	1.28	P > Q	.96	Q > U	.43
Study habits: total	P > U	.66	P > Q	.44	Q > U	.27
Homework schedules	P > U	.33	P > Q	.21	Q = U	
Methods and techn. of learning	P > U	.57	P > Q	.40	Q = U	
Coping with problems in learning	P > U	.82	P > Q	.52	Q > U	.32
Self-confidence	P > U	.55	P > Q	.42	Q = U	
Style of learning	P > U	.75	P > Q	.72	Q = U	
Social behavior	P > U	.56	P > Q	.35	Q > U	.23
Aggressive behavior	P = U		P = Q		Q = U	
Restless behavior	P = U		P = Q		Q = U	
Anxiety symptoms	P < U	.53	P < Q	.47	Q = U	
Neurotic symptoms	P = U		P = Q		Q = U	
Concern about social relations	P = U		P = Q		Q = U	
Psychosomatic troubles	P = U		P = Q		Q = U	

P = professional workers' children

Q = qualified workers' children

U = unqualified workers' children

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*Statistically significant difference between the arithmetical means in standard deviation units.

TABLE 61: Differences between equally intelligent children with regard to socio-economic status. Results of 4th grade pupils

VARIABLES			S E S			
	P x U	*	P x Q	*	Q x U	*
Achievement tests:						
Reading achievement	P > U	.66	P = Q		Q = U	
Slovene language	P > U	.89	P > Q	.36	Q = U	
Mathematics	P > U	.78	P > Q	.38	Q = U	
Social Studies	P > U	.64	P > Q	.40	Q = U	
Natural Sciences	P > U	.84	P > Q	.30	Q = U	
School marks:						
Slovene language	P > U	.99	P > Q	.61	Q > U	.41
Mathematics	P > U	.91	P > Q	.60	Q > U	.45
Social Studies	P > U	.95	P > Q	.64	Q = U	
Natural Sciences	P > U	.94	P > Q	.55	Q > U	.37
Grade point average	P > U	1.02	P > Q	.65	Q > U	.42
Occupational aspirations	P > U	.44	P > Q	.38	Q = U	
Occupat. expectations	P > U	.42	P = Q		Q = U	
Educational aspirations	P > U	.60	P = Q		Q = U	
Study habits	P > U	.66	P = Q		Q = U	
Style of learning	P > U	.94	P > Q	.50	Q = U	
Social behavior	P > U	.63	P > Q	.34	Q = U	
Aggressive behavior	P = U		P = Q		Q = U	
Restless behavior	P = U		P = Q		Q = U	
Anxiety symptoms	P < U	.40	P = Q		Q = U	
Neurotic symptoms	P = U		U = Q		Q = U	

P = professional workers' children

Q = qualified workers' children

U = unqualified workers' children

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*Statistically significant difference between the arithmetical means in standard deviation units.

TABLE 62: Differences between equally intelligent children with regard to socio-economic status. Results of 8th grade pupils

VARIABLES	S E S					
	P x U	*	P x Q	*	Q x U	*
Achievement tests:						
Reading achievement	P > U	.34	P > Q	.40	Q = U	
Slovene language	P > U	.34	P > Q	.42	Q = U	
Mathematics	P > U	.38	P = Q		Q = U	
English language	P > U	.50	P > Q	.54	Q = U	
History	P > U	.54	P = Q		Q = U	
Biology	P > U	.36	P > Q	.34	Q = U	
School marks:						
Slovene language	P > U	.60	P > Q	.51	Q = U	
Mathematics	P > U	.40	P > Q	.47	Q = U	
English language	P > U	.47	P > Q	.62	Q = U	
History	P > U	.58	P > Q	.72	Q = U	
Biology	P > U	.69	P > Q	.63	Q = U	
Grade point average	P > U	.66	P > Q	.66	Q = U	
Occupational aspirations	P > U	1.14	P > Q	.85	Q = U	
Occupat. expectations	P > U	1.36	P > Q	.99	Q > U	.38
Educational aspirations	P > U	1.10	P > Q	.89	Q = U	
Study habits: total	P > U	.72	P > Q	.54	Q = U	
Homework schedules	P > U	.46	P > Q	.36	Q = U	
Methods and techn. of learning	P > U	.52	P > Q	.46	Q = U	
Coping with problems in learning	P > U	.85	P > Q	.52	Q > U	.40
Self-confidence	P > U	.36	P > Q	.40	Q = U	
Style of learning	P > U	.45	P > Q	.63	Q = U	
Social behavior	P > U	.44	P = Q		Q = U	
Aggressive behavior	P = U		P = Q		Q = U	
Restless behavior	P = U		P = Q		Q = U	
Anxiety symptoms	P < U	.36	P = Q		Q = U	
Neurotic symptoms	P = U		P = Q		Q = U	

P = professional workers' children

Q = qualified workers' children

U = unqualified workers' children

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*Statistically significant difference between the arithmetical means in standard deviation units.

TABLE 63: Differences between children with regard to the sex.
Results of 4^{th} grade pupils

VARIABLES	M x F	*
Achievement tests:		
Reading achievement	M = F	
Slovene language	M = F	
Mathematics	M > F	.18
Social Studies	M > F	.28
Natural Sciences	M > F	.24
School marks:		
Slovene language	M < F	.36
Mathematics	M = F	
Social Studies	M = F	
Natural Sciences	M = F	
Grade point average	M = F	
Intelligence test	M = F	
Occupational aspirations	M > F	.21
Occupational expectations	M > F	.18
Educational aspirations	M = F	
Study habits	M < F	.36
Style of learning	M = F	
Social behavior	M = F	
Aggressive behavior	M > F	.79
Restless behavior	M > F	.81
Anxiety symptoms	M < F	.31
Neurotic symptoms	M = F	

M = male
F = female

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*Statistically significant difference between the arithmetical means in standard deviation units.

TABLE 64: Differences between children with regard to the sex.
Results of 8th grade pupils

VARIABLES	M x F	*
Achievement tests:		
Reading achievement	M = F	
Slovene language	M < F	.37
Mathematics	M = F	
English language	M < F	.20
History	M = F	
Biology	M = F	
School marks:		
Slovene language	M < F	.63
Mathematics	M < F	.25
English language	M < F	.49
History	M = F	
Biology	M < F	.35
Grade point average	M < F	.39
Intelligence test	M > F	.24
Occupational aspirations	M = F	
Occupational expectations	M = F	
Educational aspirations	M = F	
Study habits: total	M < F	.25
Homework schedules	M < F	.41
Methods and techn. of learning	M = F	
Coping with problems in learning	M = F	
Self-confidence	M > F	.26
Style of learning	M = F	
Social behavior	M < F	.30
Aggressive behavior	M > F	.91
Restless behavior	M > F	.58
Anxiety symptoms	M < F	.27
Neurotic symptoms	M = F	
Concern about social relations	M = F	
Psychosomatic troubles	M < F	.24

M = male

F = female

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*Statistically significant difference between the arithmetical means in standard deviation units.

CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

A child's mental development and academic achievement are very much determined by the social and cultural conditions of the family in interaction with the familial relations and the school environment. Because of the effects of environmental factors, children despite formally equal conditions in schooling do not have equal chances for studying and developing their intellectual abilities,the latter being of crucial importance for obtaining further education and a better occupational career.

Our self-governing society is trying hard to neutralize the differences that are a consequence of the effects of socio-economic and cultural conditions within the family and of other environmental factors. We are well aware that it will never be possible to erase completely these shortcomings which, however, can be diminished if given due attention. These questions ought to be more systematically and empirically examined in order to obtain an insight into the strength and effects of environmental factors in our present social conditions. This would help with planning and directing the development of the school system. Therefore we decided to examine empirically certain important questions from this field. Our objective was to gain a better insight into the effects of social differentiation in order to be able to deal with these effects in a faster and more effective way. These problems should not be neglected since this would mean maintaining the present state of affairs regarding the effects of social differentiation on the academic achievement and personality development of our children and youth.

Our research indicated that the social and cultural development of the environment has strong effects on academic achievement and some other characteristics of pupils. Particularly large differences in this respect were found between urban and rural children.

It should be stressed, however, that only qualified and unqualified town workers' children were selected for the comparison with rural children. Qualified and unqualified town workers do not differ much from rural parents with regard to education and occupational activities, and therefore the differences obtained can be considered a result of demo-geographic effects and a varying degree of urbanization.

Unqualified and qualified town workers' children displayed greater and better knowledge than their rural age-mates. The differences are larger than expected, considering that all children attend uniform curriculum elementary schools. Urban children excel over rural children in their knowledge of all the basic school subjects. Rural children have a poorer vocabulary, a poorer reading comprehension, and they also read more slowly. This linguistic shortcoming is another reason why they are less successful in school, particularly when more demanding and abstract contents are being discussed.

Rural children have fewer opportunities for developing and cultivating their speech. In the rural environment the child is presented with generally poorer speech models; the colloquial language of his parents and other adults is incomplete and often syntactically incorrect. To start with, he adopts such inadequate speech models from his family and later he adopts them from the broader environment as well. These linguistic shortcomings are so pronounced that not even the school can successfully compensate for them. We found that the differences between urban and rural children did not decrease during the years of schooling. At the end of compulsory eight year schooling, the differences were the same or even slightly larger than those found in 4th grade pupils.

The environment affects the development of intellectual abilities as well. The rural environment is socially and culturally less developed than the urban environment, therefore the rural child does not receive enough stimulation for his intellectual and personality development. Diversity and changes in the environment have the effect of encouraging the child to engage in different activities, which influence the growth of their dispositions, from which different mental abilities and other personality characteristics gradually develop.

The main reason for rural children's less developed intellectual abilities is probably to be sought along these lines. These differences between rural and town workers' children are comparatively high and they do not diminish during the years of schooling. Because of poorer abilities which are formed in interaction with a less developed environment, rural children are less successful both in reading and in learning in general. This is not to say, however, that all rural children have poorer abilities and knowledge than their urban age-mates. Many a rural child is the same or even better in this respect than some urban children.

The effects of social differentiation are evident not only in the academic achievement, linguistic and intellectual development of pupils but also in their motivation. Rural children have on average considerably lower occupational and educational aspirations than their urban age-mates from workers' families. This is probably another reason why many a rural child, although sufficiently capable, does not continue schooling at a college or university. The environmental effects are so strong that the level of occupational and educational aspirations does not change to any considerable extent in the time from the 4th to the 8th grade of elementary school.

In the personality characteristics examined, however, there are very small or even no differences between urban and rural children. This indicates that the degree of environmental development does not bring about any larger differences between urban and rural children regarding social, aggressive and restless behavior,anxiety and neurotic symptoms. The same is valid for study habits and style of learning. Thus it can be concluded that in the development of children's personality characteristics, the school is equally effective in both environments, i.e. in the town and country. It should of course be taken into account that the personality characteristics mentioned are variable and can be changed by home and school education.

We were particularly interested to find out whether there are any differences between children from semi-peasant and peasant areas. The latter have a higher percentage of peasant inhabitants than the former. The results of our research indicate that 4th grade pupils from the two rural areas do not differ very much in their academic achievement, intellectual abilities and other personality characteristics. There are, however, small differences between 8th grade pupils from the two rural areas regarding academic achievement, occupational aspirations and expectations and study habits. Yet these differences are not so large as to present an advantage for further schooling and occupational training for either of the two groups. Both areas are more or less at the same stage of social and cultural development and their inhabitants differ very little in their way of life. These conditions are reflected in the children's upbringing, their academic achievement and motivation and it is thus understandable that no large differences between them were found.

We also wanted to find out whether there are any differences between children of semi-peasants and peasants from these two rural areas. Semi-peasant families have a double income; one from the farm and the other from a job in a factory or elsewhere. Therefore we expected to find that their children would differ from peasant children on account of their better standard of living. Our results indicated, however, that children from semi-peasant and peasant families do not differ significantly in their academic achievement, intellectual abilities, motivation variables and other personality characteristics. This was the case with both 4th and 8th grade pupils. These results can be explained if we consider that semi-peasant and peasant children live in the same underdeveloped rural areas which are homogenous with regard to their social and cultural effects and therefore the higher living standard of semi-peasant families was not reflected in the variables examined. It should also be taken into consideration that semi-peasant and peasant children attend the same schools and are subject to the same educational process.

We also expected to find that the differences in the size and urbanization level of the Slovene towns in which the children lived would affect the academic achievement and personality development of these children. The results indicated, however, that there are no significant differences in the knowledge of large and small town pupils, or else these differences are only slight. This was also the case with motivation variables where small differences were found only in 4th grade pupils. There are also small differences in 8th grade pupils concerning certain personality characteristics. On the other hand, no significant differences were found in intellectual abilities, style of learning and study habits. In general it can be concluded that the size and urbanization level of towns did not affect the academic achievement and other personality characteristics of these children to any considerable extent. Without regard to the size and urbanization level, the dynamic and diverse urban environment has approximately the same effect on children. Another reason is probably also the fact that large and small towns have equally well organized and good elementary schools.

We were particularly interested in the differences among children within the urban environment. We examined children of professional, qualified and unqualified town workers. Children from these three socio-economic status (SES) groups attended the same classes and had the same teachers. Thus the differences between SES groups could not be essentially affected by the school environment.

The results obtained indicate that SES has an important influence on children's academic achievement. Professional workers' children excel over qualified and unqualified workers' children in reading achievement and in the knowledge of the basic school subjects. There are particularly large differences between professional and unqualified workers' children. These two groups are also farthest apart with regard to SES. There are smaller but still considerable differences between professional and qualified workers' children. These differences in academic achievement are a consequence of the effects of the familial environment. Professional workers' children live in a socially and culturally more favourable environment and have better opportunities for studying since they receive more stimulation and help than children from the other two SES groups. Children of more educated parents have right from early childhood better chances for learning adequate and correct speech models than children of less educated parents.

The social and cultural level of the family has a crucial influence on the development of children's intellectual abilities as well. Children from less stimulating environments cannot suitably develop their dispositions into abilities which is one of the reasons for their poorer academic achievement. This intellectual deprivation can be crucial since it can not be throughly compensated for in later years. Large differences were found particularly between professional and unqualified workers' children. Considerable differences were found also between professional and qualified workers' children at the end of compulsory schholing. During the time from the 4th to the 8th grade, the differences between children from these SES groups do not diminish either in their knowledge or in their intellectual abilities.

The most evident effects of social differentiation are found in the realm of motivation. It is surprising that the differences in occupational and educational aspirations of children from these SES groups increase essentially during the time from the 4th to the 8th grade. The aspirations of professional workers' children grow higher during the years of schooling while those of qualified and unqualified workers' children even slightly decreased.

The differences between children from different SES groups are much larger in the realm of motivation than in their academic achievement and intelligence. The large majority of professional workers' children wish to continue schooling at colleges and universities although some of them may fall below the mean of qualified and unqualified workers' children regarding their knowledge and abilities. The aspiration level of professional workers' children is thus moved upward while that of workers' children is moved downward. This indicates that aspirations strongly depend on the family in which the child lives. More educated parents direct their children to more distant goals that require more studying or longer schooling while less educated parents direct their children to closer goals that are easier to reach and quickly provide a means of earning one's living. The main reason for this diversity in outlook is not so much the financial situation of the family but more its attitudes and values which influence the attitude towards education as well.

Children's aspirations, however, depend on their academic achievement as well. More successful pupils have in general higher aspirations and less successful pupils have lower aspirations. Frequent experience of failure in school and in other achievement fields gradually lowers the children's motivation for studying. Therefore the school should pay special attention to workers' children, encouraging their interests for studying and helping them to develop their aspirations and continue schooling.

In comparing the occupational and educational aspirations of qualified and unqualified workers' children with their parents' occupations it becomes evident that these aspirations are not low. More than half these children aspirate to a considerably better education and more demanding occupations than those held by their fathers.

The familial environment has rather a strong influence on the child's style of learning and development of study habits. In this respect, professional workers' children excel significantly over their age-mates from workers' families. More educated parents can help their children more effectively in learning and discovering ways of solving more demanding problems in studying. They also stimulate them to work and encourage their self-confidence so that the children persist until the work undertaken is completed. Children of less educated parents are rather deprived in this respect. Their parents often cannot help them with their studies since they are not sufficiently qualified; some of them also underestimate the importance of education and do not take enough interest in their child's studies. The school also plays an important role in the children's development of study habits and style of learning. Our results indicate, however, that the school does not manage in this respect to diminish considerably the differences between children living in different familial environments. More could probably be done if systematic efforts were undertaken in this direction.

As to personality characteristics, the largest differences between children from different SES groups were found in social behavior. Professional workers' children relate better to their school-mates, partake more successfully in school life and find more suitable solutions in problematic situations within the classroom than do workers' children. There are particularly large differences in this respect between professional and unqualified workers' children, i.e. between the two groups that are farthest apart with regard to SES. These differences do diminish to a certain extent by the end of compulsory schooling yet they are still considerable.

The differences in social behavior have their origin in the familial environment where the primary socialization takes place. In the relationship with parents and other family members, the child learns basic principles of behavior, gradually internalizing moral and social concepts that are observed in his family and immediate social environment.

Families differ in this respect and consequently there are differences among children. More educated parents teach their children socially more acceptable forms of behavior within the family and outside it, thus accelarating the process of children's socialization. A successful primary socialization enables the child to enter and participate more easily in school. The school then carries on with the process of primary socialization. It is evident from the results that differences in social behavior that were brought about by the familial environment cannot be ironed out in school; they can only be lessened to a certain extent. Here it should be emphasized that there are rather large differences in social behavior within different SES groups also. Thus we can find well socialized children from unqualified workers'families and from professional workers' families but the latter are more numerous than the former.

Social behavior is also connected with the child's academic achievement. If the school work were more adapted to the abilities and social conditions of workers' children, the latter would be more successful both in school and among their school-mates. The school has ample opportunities in this respect to compensate a child for a deprived upbringing in his family.

Quite large differences between children from different SES groups were found in anxiety symptoms as well. Qualified and unqualified workers' children displayed more anxiety symptoms than professional workers' children. Workers' children are generally less successful in school and therefore scolded more often and they consequently experience more anxiety and tension in the classroom. These emotions, if experienced year after year, result in anxiety which can later affect other forms of the child's behavior as well. Anxiety has a particularly strong effect on the child's intrinsic motivation. The child believes he will not be able to succeed and consequently cannot gather enough energy for studying and administering to other scholastic duties. Because of these negative consequences, anxiety in the classroom should not be underestimated. In order to avoid frequent failures, the child should be encouraged and given such tasks which he can successfully solve if making an effort. Continual scoldings that offend and humiliate him should be avoided. Children from workers' families are largely subject to such negative treatment both at home and school. Our results also indicated that anxiety does not decrease during the years of schooling and that the differences between SES groups are maintained.

It is interesting that no large differences in aggression were found between children from different SES groups. In each SES group aggressive behavior appears in a very small number of pupils. Here it should be emphasized that in other countries larger differences in aggression were found between children living in different socio-economic environments. Several studies revealed that aggressive behavior is more frequent in unqualified workers' children than in middle-class children. In other words, aggressive behavior is observed mainly in those families where the children are materially and culturally most deprived. In our society there are smaller differences in the socio-economic status of families and in social life in general than is the case with western countries. Children from different SES live in the same neighbourhoods and attend the same classes which certainly helps to diminish those forms of aggression that are brought about by unsuitable socio-economic environments.

Certain studies in other countries revealed that there are significant differences between SES groups in neurotic symptoms as well. These are more frequent in children from lower SES groups than in children living in abundant social and cultural conditions. In our research, on the other hand, no significant differences in this respect were found between SES groups. Generally speaking, neurotic symptoms are very rarely observed in the children from the SES groups examined.

The differences between children from different SES groups were determined not only by the familial environment but also, to a larger or smaller extent, by the children's intelligence. As was established in the course of our research, professional workers' children excel considerably in this respect over their age-mates from workers' families. Intelligence, on the other hand, is one of the main factors in academic achievement. Therefore we were particularly interested in the question whether there are any significant differences between equally intelligent children from different

SES groups.

Our results indicated that despite equal intelligence children from different SES groups differ in their academic achievement. Unqualified and qualified workers' children generally obtained significantly lower scores in Achievement tests in the basic school subjects than did professional workers' children. The differences between SES groups diminished considerably when equally intelligent children were compared yet they still remained rather large, particularly those between professional and unqualified workers' children. It is thus evident that a child's success in school is strongly dependent on the SES of the family in which he lives. Children from workers' families do worse in school than professional workers' children even if they do not differ in intelligence. SES is thus a strong factor in children's academic achievement.

The differences between equally intelligent children from different SES groups are even larger in motivation variables. These differences are particularly evident in 8th grade pupils. Unqualified and qualified workers' children have rather lower occupational and educational aspirations than professional workers' children. It is surprising that differences in aspirations did not diminish at all when equally intelligent children were compared. From the results it can be concluded that a child's occupational and educational aspirations depend mainly on the familial environment. The parents' education, their attitudes towards learning and studying and the style of upbringing play an important role in this respect. This means that the family is usually more important for the child's occupational and educational aspirations than his intellectual abilities.

The results of our research also indicate that study habits and style of learning are rather dependent on the SES of the family. Children from workers' families, even if equally intelligent, have poorer study habits and style of learning than professional workers' children. More educated parents can help their children more effectively in studying which doubtless has an influence on the development of a suitable style of learning and good study habits. These factors are thus largely dependent on the SES of the family and less on the child's intelligence.

In our research we also compared the achievements of qualified and unqualified workers' children. The former do somewhat better in school than the latter yet the differences between them are small. In 8th grade pupils, there are no longer any significant differences in the majority of school subjects. When equally intelligent children from these two groups were compared, no significant differences in any school subject were found.

Smaller differences between these two groups were found also in occupational and educational aspirations, study habits and style of learning. Here again, qualified workers' children excel significantly over unqualified workers' children.

As to other personality characteristics, there are no significant differences between these two groups except for social behavior in which qualified workers' children excel slightly. On the whole, the differences between them are small in all the variables examined. Moreover, when equally intelligent children from these two groups were compared, the differences in the variables mentioned decreased and were no longer significant. Here it should be emphasized that these two groups of workers' children are quite close with regard to the social and cultural level of the familial environment which explains the small mean differences between them. The effects of the familial environment are most evident in the motivation variables where the differences between qualified and unqualified workers' children even increase slightly during the years of schooling.

We also examined the differences between the sexes in the urban sample. It was found that there are only small differences between boys and girls, or none at all. In the 4th grade, boys are slightly better in Mathematics, Social Studies and Natural Sciences while in the 8th grade pupils are slightly better than boys in the linguistic subjects. Girls have on average better study habits than do boys yet at the end of compulsory schooling the sexes do not differ with regard to the level of educational and occupational aspirations. There are some larger differences between boys and girls in certain personality characteristics, however. During the years of schooling boys display more aggressive and restless behavior than do girls while the girls are more anxious. These differences can be explained if we consider that parents and other adults tolerate aggressive behavior in boys rather more than in girls. With this kind of conduct they encourage aggressive behavior in boys, without being quite aware of this right from their early childhood.

Children's academic achievement as presented by their school marks should be discussed separately. So far, the academic achievement discussed was estimated on the basis of objective measures, i.e. achievement tests. A comparison between the urban and rural sample revealed that the rural children obtained significantly lower scores in achievement tests than qualified and unqualified town workers' children. When comparing their school marks, however, quite a different state of affairs is presented; namely, the rural children have significantly higher mean marks than unqualified town workers' children and approximately the same mean marks as qualified town workers' children. Rural teachers use rather milder criteria for marking their pupils' performance than do urban teachers. This discrepancy is so large that the school marks obscure or even distort the actual differences between urban and rural children's knowledge. Comparing the academic achievement of children on the basis of their school marks is still a rather common practice which, however, does not provide a realistic evidence of children's knowledge and the qualities of urban and rural schools. It is more than evident that such comparisons should not be taken at face value.

A comparison of urban children revealed that the differences between children from different SES groups are much larger in school marks than in achievement test scores. Had the children been marked on the basis of achievement test scores, the differences between professional, qualified and unqualified workers' children would have been smaller. The results revealed that subjective marking deprives mainly unqualified workers' children and partly also qualified workers' children. Thus it can be concluded that many teachers believe that workers' children, particularly those of unqualified workers; have poorer knowledge and abilities than is really the case. They do not expect very much from these children and give them insufficient stimulation and also lower school marks. This fact is disturbing without regard to the question whether teachers are aware of the problem or not.

These questions are of great importance in admitting children to secondary schools. If the criterion for urban children was solely the school marks in their reports, unqualified and qualified workers' children would be much deprived in this respect since they have on average lower marks than professional workers' children. If achievement test scores were taken as the criterion, workers' children would be in a somewhat better position, as a large number of them would be admitted to these schools. This conclusion, however, is valid for urban children only. If rural children were admitted to secondary schools on the basis of their achievement test results, their chances would diminish since their scores are rather lower than those of their town age-mates from workers' families while this is not the case with their school marks.

The results of the entire research indicate that the socio-economic status of the family in which the child lives is an important factor a his mental development and academic achievement. Socio-economic status, however, is a composite variable and does not in itself give enough relevant information about the academic achievement of an individual child. As a general principle, this composite variable covers mainly the occupation and education of the parents, the standard of living in the family, its cultural level and interpersonal relations, the parents' aspirations concerning their children's intellectual and personality development, the stimulation and help given to children with their studies and the parents style of bringing their children up. Some of these factors affect the child's academic achievement directly, others indirectly. The occupation and education of parents, standard of living and the cultural level of the family have rather indirect effects, while the influence of other factors, namely interpersonal relations in the family, parents' aspirations and their attitudes towards education and also concrete forms of directing a child to learning, is quite direct. A child's academic achievement is to a large extent determined by these direct factors. This also explains the large individual differences between children within each SES group. Thus, very successful and unsuccessful children can be found within each SES group although in different percentages.

These direct factors can be modified. Schools, kindergartens and other social institutions play an important role in this process. Such efforts should be strongly promoted so that the parents may obtain a better insight into their role in the education and development of their children. The indirect factors are more difficult to modify yet changes do appear in this field as well. The differences in the living standard of our families are considerably smaller nowadays than they used to be. The educational and cultural level of parents also changes yet this progress is a lot faster in town than in the rural areas.

Our rural environment is,in a social and cultural respect, essentially less developed than that of urban areas. This state of affairs in the countryside is reflected in family conditions as well. It is manifested in the lower aspirations of rural parents concerning their children's education, and in the insufficient stimulation and help that the child received from them. On account of their own poor education, rural parents cannot successfully help their children with their studies even if they want to.Because of these factors rural children have a poorer knowledge of basic school subjects than their urban age-mates although both groups attent schools with a uniform curriculum. It is evident that the school cannot eliminate all the consequences of the socially and culturally deprived rural environment in interaction with familial conditions. These are primary factors that have a determining influence on rural children's academic achievement.

Rural schools are also less suitably equipped, have fewer modern laboratories and in the higher grades also fewer adequately qualified teachers than is the case with urban schools. This can additionally enlarge the gap between the academic achievement of urban and rural children. There are rather large differences between urban and rural schools in this respect yet this is not the major reason for the poorer academic achievement of rural children.

We are aware of the fact that familial deprivation can never be completely compensated for. Yet it is the task of our society to iron out these differences to the greatest possible extent. Rural children are most deprived in this sense, therefore more careful attention should be paid to them than has been the case so far. Large differences in intellectual and linguistic abilities between children from different social strata appear very early, therefore rural children should attend kindergartens in the pre-school period in order to obtain a systematic pre-school education. Thus these children would be in a favourable enough situation to develop their dispositions into abilities, to enlarge their vocabulary and learn adequate speech models and also develop other personality features which later have an effect on suitable social relations and academic achievement. It is a pity that rural children have so far not been given enough opportunities for an optimal mental and personality development since there are very few kindergartens in the rural areas. If this socially determined deprivation is were not systematically dealt with in the pre-school period, a lot of harm will be done since later not even the schools can quite compensate for them.

Kindergartens are rather important for urban children as well. A systematic pre-school education is benefical for all children without regard to the social position of the parents but particularly for children from deprived familial environments where the parents have a poorer education and lower aspirations concerning their children's development and education. Not even urban schools which are better equipped and organized can compensate for greater deprivation from the pre-school period.

Familial conditions are strongly reflected in childrens academic achievement. Because of the differences brought about by the environment in which children live, many of them have difficulties in school, partirularly in the higher grades. It should be noted that our schools still give the children quite a lot of homework. Many rural parents or parents who are unqualified or qualified workers cannot help their children because of their own poor education and do not provide their children with sufficient stimulation, either. Mostly they have work to do throughout the day and cannot find the time to help the child with his studies. These problems can be solved if the school takes over where the family has failed. The best solution to these problems is the whole-day school where teachers help the pupils in studying and in doing their homework. Thus children can do all the work required in the school. At the same time such a school helps children to spend their free time usefully and systematically which is very important for their optimal development.

These essential function of the whole-day school is its educational role which should take into account the individual abilities of each pupil and make it possible for him to make regular progress in school and to grow into a well-developed personality. With such well organized activities the school can compensate for familial deprivation to quite a large extent and thus help to diminish the effects of social differentiation. The whole-day school would be very benefical not only for urban but most of all for rural children.

These compensating measures can diminish the differences between children who live in abundant and deprived environments. Our research also indicates that the present curricula are too extensive and too demanding for the majority of pupils. They are better adapted to the abilities of 4th grade pupils than to those of 8th grade pupils. Workers' children attending the 8th grade solved on average 50% of the items, while professional workers' childrens' figures were 60% on average. The percentages are slightly higher only in Slovene language achievement. In general it can be concluded that the with regard to the number of lessons given, the programmes are too extensive for the children to master the learning material successfully. This is probably one of the reasons why the children had forgotten such a lot of the material learned by the end of the school year.

Therefore the problem of overloaded programmes must be solved;

they should be cleared of less important time-consuming matters. Our main objective should be the development of cognitive processes in pupils, who should thus be enabled to acquire further knowledge on their own.

SUMMARY

The problem

Numerous foreign research works showed that the social and cultural environment in interaction with familial conditions plays an important role in children's academic achievement and the development of their personality characteristics. When discussing these influences, the conditions of the existing social order and the school system should also be taken into account.

Where differences in the socio-economic and cultural conditions of life are larger, more pronounced differences in the cognitive and personnality development of children can be expected. Some partial research works from our country indicate that the socio-economic factors and the level of environmental development still play quite an important role in the development of children's intellectual abilities, academic achievement and some other personality characteristics even in our country where differences among classes in the traditional sense have been abolished.

We were interested to find out whether there are any differences in academic achievement, intellectual abilities, occupational and educational aspirations, study habits, style of learning and some other personality characteristics between children

1 from large and small towns
2 from semi-peasant and peasant areas
3 of semi-peasant and peasant parents
4 from urban and rural areas

5 with regard to the socio-economic status (SES) of their parents
6 who are equally intelligent but differ with regard to SES
7 with regard to the sex.

The sample

The research included 4th grade pupils (ten-years-olds) and 8th grade pupils (fourteen-year-olds) from elementary schools. Urban children were divided with regard to the size of towns in the Republic of Slovenia into three substrata: large towns - marked T-1 in the text (population over 100,000), small towns - marked T-2 (population 5,000 to 20,000) and small towns - marked T-3 (population less than 5,000). It is typical of Slovene urbanization that most of the urban population lives in two large and 67 small towns. 168 pupils (12 pupils from each of the 14 schools selected) were included from each urban substratum. Thus the planned urban sample contained 504 4th grade pupils and 504 8th grade pupils. The urban sample was at the same time structured so that it covered the three main strata with regard to SES, namely professional, qualified and unqualified workers' children. These groups of children are marked P, Q and U in the text.

The rural sample covered two areas: semi-peasant and peasant. 40% - 75% of the population in the former are peasants while the latter has more than 75% of peasant inhabitants. The former was marked R-1 and the latter R-2. 112 pupils (8 pupils from each of the 14 schools selected) were chosen from each rural area. The rural sample thus contained 224 4th grade pupils and 224 8th grade pupils. Half the rural sample was covered by children from peasant families (both mother and father were peasants) while the others half contained children from semi peasant families (one of the parents, usually the father, was regularly employed outside the farm while the family also had an income from farming). The former are marked PP in the text and the latter are marked SP.

Method

One of the main problems of our research was determining the scholastic achievement of the pupils. This was done in two ways, namely by means of traditional school marks and by means of achievement tests. The latter were not readily available, therefore they had to be made. Achievement tests for 4th grade pupils covered the following subjects: Slovene language, Mathematics, Social Studies and Natural Sciences. Achievement tests for 8th grade pupils were constructed for the following subjects: Slovene and English language, Mathematics, History and Biology.

For determining the pupils' reading achievement, the "Inter-American Series" test by Herschel T. Manuel, Austin, Texas, was slightly modified to suit our needs. The reading achievement test for 4th and 8th grade pupils consisted of 3 parts: vocabulary, reading speed and reading comprehension. The pupils' intelligence was determined by the Lorge-Thorndike Intelligence test. We used the non-verbal battery of the multi-level edition, A level for 4th grade and D level for 8th grade pupils.

Separate questionnaires were compiled for determining the pupils' study habits. A factor analysis was carried out, applying the "principal components" method. The factors for 4th grade pupils, however, cannot be clearly determined by means of the results of this analysis; thus, only the total score was used. For 8th grade pupils, however, four factors were extracted and identified as follows: homework schedules, methods and techniques of learning, coping with problems in learning and self-confidence.

A special questionnaire served for determining the pupils' occupational aspirations and expectations. The children were to answer the question: "What occupation would you like to have when you grow up?" In the case of occupational expectations, the children were to answer the question: "What occupation do you think you will probably have when you grow up?" The occupations the children mentioned were divided into six groups and assigned 1-6 points. The educational aspirations were determined by the children's reports as to which school they wished to attend after completing primary school. The categories were given 1-5 points where 1 point stood for university education and 5 points for elementary school education.

The pupils' personality characteristics were determined by means of a questionnaire which initially contained 40 descriptions. After a factor analysis was carried out, only 28 descriptions of behavior that were sufficiently saturated with the identified factors, were found satisfactory. These were marked as follows: style of learning, social behavior, restless behavior, anxiety and neurotic symptoms. The teachers rated their pupils' behavior by means of a 5-point rating scale.

The youth inventory was used only for 8th grade pupils. It was based on the American SRA Youth Inventory (type S), by H.H. Remmers and B. Shimberg (1969). The inventory proved to be rather heterogenous and saturated with several factors. We used only those questions that covered concern about social relations and concern about psychosomatic troubles. The pupils answered questions by marking the most appropriate answer on a 4-point rating scale.

The teachers also provided other data on the pupils and their parents. They reported how many hours each pupil had been absent from lessons, how far from the school the pupils lived, how often the parents attended Parent-Teacher meetings, in what housing conditions pupils lived, etc. The educational authorities provided some data on the schools and teachers who were included in our research.

Since several instruments for measurement were used the testing had to be carried out in two phases. The first testing was done in May and the second in June, 1973.

The differences in the variables examined between children from large and small towns and the differences with regard to SES and the sex were examined by a three-way analysis of variance. The analysis was thus made according to the 3 x 2 x 2 design. The differences between rural children were examined by an analysis of variance of 2 x 2 x 2 design. The results of equally intelligent children who differed with regard to SES were computed by t-test. The relationships between criterion and predictor variables were calculated by product-moment correlation (r).

Results with discussion

1. Differences between children from large and small towns

We anticipated that children from large and more developed towns would generally be more successful in school than their small town age-mates. We also expected to find personality characteristic differences between them. In 4th grade pupils (ten-year-olds) no significant differences in achievement tests in the basic school subject were found. In 8th grade pupils (fourteen-years-olds) significant differences, ranging from .25 SD to .34 SD, were found only in Slovene and English language achievement tests.

4th grade pupils from large towns displayed somewhat higher occupational aspirations and expectations than their small town age-mates. The mean differences range from .22 SD to .41 SD. These differences are no longer found in 8th grade pupils. These diferences most probably occurred because children at lower stages of schooling do not yet have sufficient experience about the demands of various occupations and at the same time they are not yet able to assess their abilities which are still in the process of development, quite realistically. It seems that occupational and educational aspirations do not depend much on the level of urbanization and size of the town in which the child lives and goes to school.

There are no significant differences between children from large and small towns in intellectual abilities, style of learning and study habits. As to other personality characteristics, small differences were found only in 8th grade pupils. Large town pupils displayed more restless behavior and more anxiety symptoms than their small town age-mates yet these differences are not large; they amount to .30 and .29. On the other hand, small town children proved to be more sociable, the mean difference amounts to .29 SD.

On the whole it can be concluded that the size and level of urbanization of our towns do not affect the academic achievement and other personality characteristics of pupils to any considerable extent. Another reason why no differences or else very small ones were found between children from large and small towns is also the fact that all towns have equally good and well organized elementary schools.

2. Differences between children from semi-peasant and peasant areas

We were also interested to find out whether there are any differences between rural children from semi-peasant and peasant areas. We expected that children from semi-peasant areas would do better in school than children from peasant areas. We also expected to find personality characteristic differences between them. It can be seen from the results, however, that 4th grade pupils from the two rural areas do not differ in academic achievement except in Slovene language achievement where the mean difference amounts to .31 SD in favor of the children from semi-peasant areas. In 8th grade pupils there are significant differences in achievement test scores in several subjects. Children from semi-peasant areas received higher scores in reading, Mathematics, History and Biology. These differences, however, are not large, ranging from .29 SD to .44 SD.

4th grade pupils from semi-peasant and peasant areas do not differ significantly in their occupational and educational aspirations. As to 8th grade pupils, however, higher occupational aspirations were expressed by children from semi-peasant areas, the mean difference being .38 SD. There were no significant differences between children from these two rural areas in educational aspirations.

These two groups of rural children do not differ in their intellectual abilities and style of learning, either. As to study habits, differences were found only in 8th grade pupils; children from semi-peasant areas displayed somewhat better study habits than their age-mates from peasant areas. The mean difference is small, amounting to .28 SD. Neither were there any significant differences between the two groups of rural children in social, aggressive and restless behavior, anxiety and neurotic symptoms. This was the case with both 4th and 8th grade pupils.

Generally speaking, the differences between children from the two rural areas concerning academic achievement and personality characteristics are small or they do not exist. Thus it cannot be expected that children from one or the other area would be in an advantageous position with regard to further schooling and vocational choice. The two areas are at the same stage of social and cultural development and their inhabitants have a very similar way of life. This rural environment is strongly reflected in the upbringing of children, in their academic achievement and motivation, and therefore no large differences between them were found.

3. Differences between semi-peasant and peasant children

Half the children in both rural samples are from peasant families (both mother and father are peasants) while the other half are from semi-peasant families (one of the parents is employed outside the farm). We anticipated that semi-peasant children would do better in school and also differ in other personality characteristics from peasant children. Since semi-peasant families have a double income, namely one from farming and the other from the job outside the farm and thus have a better living standard.

The results indicated, however, that semi-peasant and peasant children do not differ significantly in their academic achievement, intellectual abilities, motivation and personality variables. This was the case with both 4th and 8th grade pupils. The results obtained can be explained if we consider that semi-peasant and peasant children live in the same rural areas which are underdeveloped and homogenous with regard to their social and cultural effects so that the somewhat higher living standard of semi-peasant families did not figure in the variables examined. Moreover, semi-peasant and peasant children attend the same schools and are subject to the same educational process.

4. Differences between urban and rural children

In this comparison, professional workers' children were excluded from the urban sample since their parents differed considerably from rural children's parents in the way of education and occupational activities. Qualified and unqualified town workers are closer in this respect to peasants and other workers in the countryside.

a) Differences between unqualified town workers' children and rural children

Among 4th grade pupils, unqualified town workers' children obtained higher scores in reading and achievement tests in Slovene language, Mathematics and Social Studies. The mean differences range from .47 SD to .85 SD. The picture is similar for 8th grade pupols. Unqualified workers' children excelled over rural children in reading, achievement tests in Slovene language, Mathematics, English language, History and Biology. The mean differences range from .48 SD to 1.01 SD. At the end of elementary schooling, the greatest academic shortcoming of rural children, if compared to their urban age-mates, is in reading and Mathematics.

If academic achievement is estimated on the basis of school marks, however, quite the opposite picture is obtained. Rural children have a higher Grade point average than urban children.

In 4th grade pupils this difference amounts to .33 SD and in 8th grade pupils to .26 SD. School marks evidently did not provide a realistic picture of urban and rural children's academic achievement; in such a presentation, the actual differences between the two groups are obscured or even distorted.

Rural children also have lower occupational and educational aspirations than their age-mates from unqualified town workers' families. In 4th grade pupils these differences range from .35 SD to .58 SD while in 8th grade pupils **range** from .39 SD to .46 SD.

Rural children obtained lower scores in the non-verbal intelligence test than did unqualified town workers' children. In 4th grade pupils the difference between these two groups amounts to .63 SD and in 8th grade pupils to .66 SD. It is evident that because of their unstimulating environment rural children do not manage during the years of schooling to make up for their poorly developed intellectual abilities.

No systematic differences between these two groups were found either in study habits or in style of learning.

As to personality characteristics, the differences between urban and rural children are very small or they do not exist at all. Rural children excel over this group of urban children in social behavior where the difference amounts to .35 SD in 4th grade pupils and to .27 SD in 8th grade pupils. It is interesting that rural children displayed greater concern about their social relations and their psychosomatic troubles than unqualified town workers' children. Yet these differences are small, amounting to .21 SD and .25 SD. There were no significant differences between these two groups in aggression, restlessness, anxiety and neurotic symptoms. Hence our conclusion that the school has approximately the same effect on the development of personality traits in the urban and rural environment. It should be emphasized, though, that the personality traits mentioned are more variable and easier to modify than cognitive abilities.

b) Differences between qualified town workers' children and rural children

Among 4th grade pupils, qualified town workers' children obtained higher scores both in reading and in all the achievement tests in the basic school subjects than did their rural age-mates. The mean differences range from .53 SD to 1.10 SD. Significant differences between these two groups were found in all the subjects in the case of 8th grade pupils as well, the mean differences ranging from .55 SD to .95 SD. There are particularly large differences in reading and Mathematics. This indicates that rural children during the years of schooling cannot compensate for the shortcomings in their knowledge. Neither can their parents help them in the higher grades of elementary school to cope effectively with their scholastic problems.

The picture is different if we compare the academic achievement of the two groups on the basis of their school marks. In the 4th grade, qualified town workers' children have on average slightly higher marks in certain subjects while in the 8th grade there are no differences between these groups in any school subject. This indicates that rural teachers use rather milder criteria for marking their pupils which is particularly the case towards the end of compulsory schooling.

The rural children have on average considerably lower occupational and educational aspirations than qualified town workers' children. These differences range from .61 SD to .84 SD in 4th grade pupils and from .68 SD to .84 SD in 8th grade pupils. This is one of the reasons why many a rural child, even if sufficiently capable, does not continue schooling at secondary school or university. The environmental influences are so strong that the level of occupational and educational aspirations is not modified to any considerable extent during the period from the 4th to the 8th grade of elementary schooling.

Qualified town workers' children excel considerably over their rural age-mates in intellectual abilities. The mean difference amounts to .89 SD in 4th grade pupils and .84 SD in 8th grade pupils. Because of the poorer abilities developed in interaction with an underdeveloped environment, rural children are less successful in school.

Qualified town workers' children also have better study habits than their rural age-mates. The mean difference amounts to .57 SD in 4th grade pupils and .22 SD in 8th grade pupils.

There were no significant differences between these two groups in style of learning. In these results, there is undoubtedly an appreciable "halo-effect", in spite of attempts to avoid it.

There were no significant differences between these two groups in social and aggressive behavior and anxiety symptoms. Small differences between the groups were found in restless behavior and neurotic symptoms but not systematically in both 4th and 8th grade pupils. In general it can be concluded that urban and rural children do not differ much with regard to these personality characteristics and that no considerable differences in this respect appear during the years of schooling.

Rural children, however, displayed more concern about their social relations and their psychosomatic troubles than did urban children. The mean differences were .35 SD and .39 SD.

Rural children obviously want more social affirmation and more opportunities for social activities than is the case with their urban age-mates. The reasons for rural children's greater concern about their psychosomatic troubles can be sought in their greater share of physical work and in their lower living standard.

In conclusion it can be stated that the differences in achievement test scores, intellectual abilities and motivation variables between urban and rural children are larger than expected. The rural child has fewer oportunities for cultivating his speech since he meets with rather poor speech models both in his family and later in the broader environment. The rural environment does not provide sufficient stimulation for the child's intellectual development, either. The effects of social differentiation on rural children are also strongly reflected in their occupational and educational aspirations which are considerably lower than those of their urban age-mates. Rural children's deprivation in all these respects is so substantial that not even the school with its educational programs can quite compensate for it. More specialized compensatory programs for these children would be needed.

5. Differences between children with regard to the socio-economic status (SES) of their parents

We were particularly interested in SES group differences within the urban sample which consisted of professional, qualified and unqualified workers' children. They all attended the same classes and were taught by the same teachers. The SES group differences were thus not substantially affected by the school environment.

a) Differences between professional workers' children and unqualified workers' children

Professional workers' children obtained considerably higher scores in the reading achievement test and all the achievement tests in the basic school subjects than did unqualified workers' children. The differences are relatively large, ranging from .90 SD to 1.05 SD in 4th grade pupils and from .60 SD to .82 SD in 8th grade pupils. The smaller differences in 8th grade pupils can be explained considering that the pupils who did not progress regularly from grade to grade (this was mostly the case with unqualified workers' children) were not covered by this sample. Therefore we believe that the differences in knowledge and skills between these two groups which are farthest apart with regard to SES, are maintained.

The differences in school marks, as assigned by teachers, are considerably larger than those in achievement test scores. In 4th grade pupils, these differences are very large in all the subjects, ranging from 1.10 SD to 1.21 SD while in 8th grade pupils they range from .82 SD to .96 SD. It appears that the teachers tend to mark workers' children more severely than professional workers' children, on some grounds which are different from academic achievement.

Occupational and educational aspirations provided a rather interesting picture. These aspirations are much higher in professional workers' children than in unqualified workers' children. They range from .64 SD to .69 SD in 4th grade pupils and from 1.11 SD to 1.28 SD in 8th grade pupils. Our analysis revealed that the aspirations of professional workers' children's grow higher during the years of schooling while those of unqualified workers' children even slightly decrease.

Professional workers' children also have more developed intellectual abilities than unqualified workers' children. The mean difference amounts to .79 SD in 4th grade pupils and .65 SD in 8th grade pupils.

Significant differences between these two groups were found in study habits and style of learning as well. Professional workers' children excel in these respects over unqualified workers' children. The mean difference in study habits amounts to .67 SD in 4th grade pupils and .66 SD in 8th grade pupils. The differences between the two groups are somewhat larger in style of learning: 1.09 SD in 4th grade pupils and .75 SD in 8th grade pupils. More educated parents can help their children more effectively with their studies and in finding ways of solving the more demanding learning problems. They also encourage them to persevere until the work undertaken is completed. Children of less educated parents, on the other hand, are in this respect rather left to themselves. Moreover, their parents cannot help them with their homework even if they want to.

The effect of the social and familial environment is reflected in the children's social behavior as well. Professional workers' children are in general more socialized than unqualified workers' children. The mean difference is .82 SD in 4th grade pupils and .56 SD in 8th grade pupils. It is our assumption that these differences decrease slightly under the influence of education in school yet they cannot be completely eliminated because of the strong effects of the familial environment. It is interesting that professional workers' children displayed less anxiety than unqualified workers' children. The mean difference is .47 SD in 4th grade pupils and .53 SD in 8th grade pupils. It seems that anxiety is rather connected with the demand of the educational programs and the child's success in school. As to other personality characteristics, no systematic differences were found between these two SES groups.

To sum up, the differences between these two groups which are farthest apart with regard to SES, are very large in academic achievement and intellectual abilities and larger still in their occupational and educational aspirations. The great majority of professional workers' children wish to continue schooling at college and university even though a number of them may fall under the mean of workers' children regarding knowledge and intelligence. Thus it is evident that a child's aspirations are strongly dependent on the family in which he lives.

b) Differences between professional workers' children and qualified workers' children

Professional workers' children obtained higher scores in the reading achievement test and achievement tests in the basic school subjects than did qualified workers' children. The differences range from .57 SD to .69 SD in 4th grade pupils and from .40 SD to .68 SD in 8th grade pupils.

The differences between these two SES groups in school marks are larger still, ranging from .66 SD to .73 SD in 4th grade pupils and from .64 SD to .75 SD in 8th grade pupils. Thus the effects of SES factors are reflected more in the children's school marks than in their achievement test scores. It is evident that the school marks, as assigned by teachers, favor professional workers' children.

This comparison also revealed that during the years of schooling the differences in occupational and educational aspirations increase in favour of professional workers' children. These differences range from .40 SD to .49 SD in 4th grade pupils and from .82 SD to .96 SD in 8th grade pupils. The effects of social differentiation are the strongest in this field.

There is a somewhat smaller difference between these two groups concerning intellectual abilities. It amounts to .47 in 4th grade pupils and .57 SD in 8th grade pupils.

Professional workers' children also excel over qualified workers' children in study habits and style of learning. The difference in study habits amounts to .28 SD in 4th grade pupils and .44 SD in 8th grade pupils. The difference in style of learning amounts to .66 SD in 4th grade pupils and .72 SD in 8th grade pupils. It is evident that the school does not manage to reduce these differences between the two groups.

Significant differences between these two SES groups were found in social behavior and anxiety symptoms as well. Professional workers' children are slightly more socialized and display less anxiety than do qualified workers' children. As to social behavior, the differences amount to .42 SD in 4th grade pupils and .35 SD in 8th grade pupils. In anxiety symptoms, the differences between the two groups amount to .24 SD in 4th grade pupils and .47 SD in 8th grade pupils. Evidently, workers' children become more anxious towards the end of compulsory schooling which can be explained considering the increased demands of the school and the problems about their future occupational carrer. As to other personality characteristics, no significant differences between the two groups were found.

In general, the differences between these two SES groups concerning personality characteristics are small or else they do not exist at all. The differences in their academic achievement, intellectual abilities, occupational and educational aspirations, however, are considerably larger.

To sum up, the SES of a child's family is an important factor in his mental development and academic achievement. It should be pointed out, however, that very successful and unsuccessful children can be found within each SES group although in different percentages. In order to reduce the effects of social differentiation between children from different SES groups, an early intervention would be needed. A very effective solution would probably be providing kindergartens for children from less favourable environments since deprivation in early childhood is very difficult to compensate for in later years. Another solution would be to provide well organized whole-day schools with broader and more individual activities.

c) Differences between qualified workers' children and unqualified workers' children

In 4th grade pupils, significant differences in the knowledge of the basic school subjects were found between these two groups. Qualified workers' children received higher scores in the reading achievement test and achievement tests in all subjects. The differences range from .26 SD to .48 SD. In 8th grade pupils, significant differences were found only in reading achievement and History. These differences are small, amounting to .23 SD and .27 SD. It is our assumption that these results are partly a consequence of the fact that the 8th grade sample did not cover those children who had not progressed regularly from grade to grade. Thus it is not certain that the differences in the knowledge of children from these two SES groups diminish or even disappear towards the end of compulsory schooling.

This comparison also revealed that the difference between the two groups is considerably larger in school marks than in achievement test scores in the same subjects. The differences in school marks in individual subjects range from .48 SD to .57 SD in 4th grade pupils while in 8th grade pupils these differences in individual subjects are no longer found except in Slovene language where they amount to .25 SD. But there is still a significant difference between these two groups in Grade point average; it amounts to .23 SD.

Qualified workers' children excel significantly over unqualified workers' children in occupational and educational aspirations. These differences range from .20 SD to .24 SD in 4th grade pupils and from .28 SD to .43 SD in 8th grade pupils.

In general, workers' children aspire to occupational levels considerably higher than the present level of their fathers' occupation. Their desire for occupational mobility is very marked.

As to intellectual abilities, a difference between these two SES groups was found only in 4th grade pupils. Qualified workers' children excel significantly over unqualified workers' children, the mean difference being .34 SD. 8th grade pupils do not differ in this respect, which is probably a consequence of the fact that less able pupils (mostly from families of unqualified workers) had failed earlier.

There is a similar picture in style of learning. A significant difference between these two SES groups is found only in 4th grade pupils. It amounts to .49 SD in favor of qualified workers' children. As to study habits, significant differences were found in both 4th and 8th grade pupils. They amount to .42 SD and .27 SD in favor of qualified workers' children.

There are significant differences between these two groups in social behavior as well. Qualified workers' children excel over unqualified workers' children in this respect, the mean difference being .37 SD in 4th grade pupils and .23 SD in 8th grade pupils. As to anxiety symptoms, a significant difference was found only in 4th grade pupils, amounting to .47 SD. Unqualified workers' children displayed more anxiety symptoms than did their age-mates from qualified workers' families. In other personality characteristics, no significant differences between these two SES groups were found.

In general it can be concluded that the differences between these two SES groups in academic achievement, intellectual abilities and other personality characteristics are comparatively small or they do not exist at all, particularly at the end of compulsory schooling. This can be explained if we consider that these two groups are rather close with regard to SES. The effects of the social and cultural environment are refledted to the largest extent especialy in children's occupational and educational aspirations.

6. Differences between equally intelligent children with regard to SES

The differences between children from different SES groups were to a larger or smaller extent brought about by their intelligence as well. Therefore we were particularly interested in the question whether there are any significant differences in academic achievement and other personality characteristics between equally intelligent children from different SES groups.

Our results indicated that equally intelligent children from different SES groups achieve rather different success in school. Professional workers' children obtained considerably higher scores in the reading achievement test and achievement tests in the basic school subjects than did unqualified workers' children. The mean differences in individual subjects range from .64 SD to .89 SD in 4th grade pupils and from .34 SD to .54 SD in 8th grade pupils. The differences between these two groups are even larger in the school marks, assigned by teachers. In 4th grade pupils these differences in individual subjects range from .91 SD to 1.02 SD while in 8th grade pupils they range from .47 SD to .69 SD.

A comparison of professional and qualified workers' children revealed that even though they are equally intelligent, the former still do significantly better in the majority of school subjects. In 4th grade pupils there are significant differences between these two groups in all the achievement tests, ranging from .30 SD to .40 SD. In 8th grade pupils, significant differences were found in reading achievement, English and Slovene language and Biology. They range from .34 SD to .54 SD. On the other hand, school mark differences between these two groups were found in all the subjects. They range from .55 SD to .65 SD in 4th grade pupils and from .47 SD to .72 SD in 8th grade pupils. The differences in school marks are larger than those in achievement test scores in the same subjects.

The comparison of qualified and unqualified workers' children presented a somewhat different picture. No significant differences in achievement test scores between these two groups were found in either 4th or 8th grade pupils. This can be explained considering that these two groups of children were equally intelligent and also quite close with regard to SES.

Differences between children from different SES groups were found also in occupational and educational aspirations. Professional workers' children excel over unqualified workers' children in this respect. The mean differences range from .42 SD to .60 SD in 4th grade and from 1.10 SD to 1.36 SD in 8th grade pupils. The latter differences are surprisingly large, particularly if we consider that equally intelligent children were compared. This indicates that children's aspirations depend mostly on the SES of their families.

The comparison of professional and qualified workers' children indicated that in 4th grade pupils there are significant differences only in occupational aspirations, amounting to .38 SD. In 8th grade pupils, on the other hand, significant differences were found in all three motivation variables. They are large, ranging from .85 SD to .99 SD. This comparison also indicates that aspirations depend very much on the SES of the child's family.

No significant differences between qualified and unqualified workers' children were found in occupational and educational aspirations. This was the case with both 4th and 8th grade pupils.

Professional workers' children differ from unqualified workers' children in study habits as well. The differences between the two groups amount to .66 SD in 4th grade pupils and .72 SD in 8th grade pupils. Differences between professional and qualified workers' children were found only in 8th grade pupils where the difference with regard to the total score amounts to .54 SD. Equally intelligent qualified and unqualified workers' children do not differ in study habits. It seems that study habits also depend more on the SES of the child's parents than on his intelligence.

Significant differences between equally intelligent children from different SES groups were found in style of learning as well. Professional workers' children have a better style of learning than unqualified workers' children. The mean difference amounts to .94 SD in 4th grade pupils and .45 SD in 8th grade pupils. Professional workers' children excel over qualified workers' children as well; the difference is .50 SD in 4th grade pupils and .63 SD in 8th grade pupils. The differences between the groups are comparatively large, particularly if we consider that equally intelligent children were compared. This indicates that a child's style of learning depends very much on the SES of his family. At the same time we must take into account the fact that the teachers' rating of such a trait is somewhat affected by their pupils' class performance.

As to personality characteristics, significant differences between professional and unqualified workers children were not found in all the variables. The former excel over the latter in social behavior, the mean difference being .63 SD in 4th grade pupils and .44 SD in 8th grade pupils. Besides, professional workers' children display fewer anxiety symptoms than unqualified workers' children. This difference amounts to .40 SD in 4th grade pupils and .36 SD in 8th grade pupils. No significant differences between them were found in other personality characteristics. Nor were there any systematic differences in personality characteristics between the children of professional and qualified workers, nor between those of qualified and unqualified workers.

7. Sex differences

We were also interested in the question whether there are any significant differences in academic achievement and other personality characteristics between boys and girls. Our hypothesis anticipated no such differences.

The results indicate that in the 4th grade, boys excelled over girls in Mathematics, Social Studies and Natural Sciences achievement test scores. These differences ranged from .18 SD to .28 SD. No significant differences between the sexes were found in reading achievement and Slovene language achievement. The picture is slightly different for 8th grade pupils. Differences are found only in linguistic subjects in which girls excel over boys. The mean differences in the Slovene language achievement test is .37 SD and in the English language achievement test .20 SD. It appears that the differences between the sexes concerning knowledge of the basic school subjects are rather small or they do not exist at all. A tendency is observed, however, that in early adolescence girls display a somewhat greater interest in the linguistic subjects which they also master somewhat better than do boys.

School marks as assigned by teachers provide a different picture. In the 4th grade, girls have higher mean marks in Slovene language than boys, the mean difference being .36 SD. There are no school mark differences between the sexes in other subjects although girls obtained lower scores in achievement tests than did boys. This means that the teachers gave girls on average higher marks. This tendency was observed in the 8th grade as well - the girls have higher marks in all the subjects except for History. These differences ranged from .25 SD to .63 SD. It is obvious that teachers tend to favor girls over boys, not because girls outperform boys academically, but because girls exhibit better study habits and tend to behave in more compliant and disciplined ways that teachers find easier to work with.

No sex differences concerning intellectual abilities were found in 4th grade pupils. In the 8th grade, however, boys excelled slightly over girls in this respect. The difference is small, amounting to .24 SD. Here it should be stressed that a non-verbal intelligence test was used. It is possible that in the period of adolescence boys are better at tackling non-verbal tests while girls do better in verbal ones.

In the 4th grade, boys somewhat exceeded girls in their occupational aspirations and expectations where these differences amount to .21 SD and .18 SD. In educational aspirations there were no differences between the sexes. No differences in these respects were found in 8th grade pupils. Girls appear to feel in general just as sure as boys that they can set themselves career goals and achieve them.

No significant differences between the sexes were found in style of learning. There were, however, significant differences in study habits which amount to .36 SD in 4th grade pupils and .25 SD in 8th grade pupils. These differences are not large yet they are obvious not only in the lower but also in the higher grades of elementary school.

Some small differences between the sexes were found in social behavior as well, although only in 8th grade pupils. They amount to .30 SD. Boys are in general also rather more aggressive and restless than girls. In the 4th grade these differences amount to .79 SD and .81 SD while in the 8th grade they amount to .91 SD and .58 SD. Boys are more aggressive and restless not only in the childhood period but also in early adolescence. These differences can be explained if we consider the fact that parents and other adults are usually more tolerant towards aggressive behavior in boys even if they are not quite aware of it.

Small but consistent differences between the sexes appear in anxiety symptoms as well. Girls are generally more anxious than boys. In the 4th grade, this difference amounts to .31 SD and in the 8th grade .27 SD. Significant differences between the sexes were found in the concern about psychosomatic troubles. Girls are in general slightly more concerned about their not feeling well than are boys. The mean difference amounts to .24 SD. No significant differences between the sexes were found in neurotic symptoms, however.

In general it can be concluded that the differences between the sexes in the variables examined are small or else they do not exist at all. Systematic differences can be found only in the school marks, in study habits and some personality characteristics, i.e. in aggression, restlessness and anxiety.

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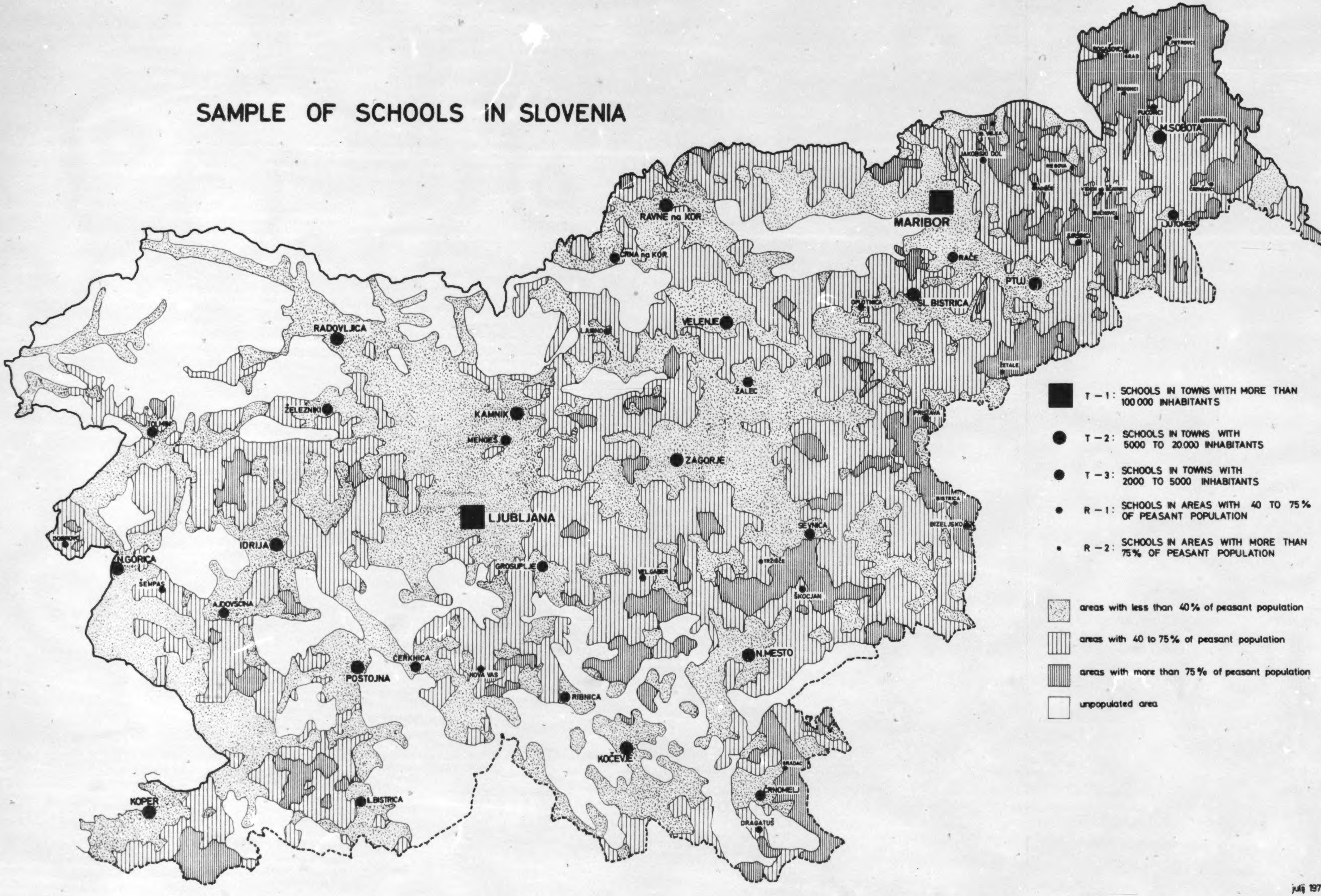
SAMPLE OF SCHOOLS IN SLOVENIA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DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
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ERIC REPORT RESUME

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TITLE

Achievement and Personality Characteristics of School Children in Relation to Environment

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SOURCE CODE

REPORT/SERIES NO.

OTHER SOURCE

SOURCE CODE

OTHER REPORT NO.

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OTHER REPORT NO.

PUB'L. DATE 30 -Jun- 77

CONTRACT/GRANT NUMBER OEG-9-001-001-827

PAGINATION, ETC.

497 p.

RETRIEVAL TERMS

IDENTIFIERS

ABSTRACT

The study examines the influence of the urban and rural environment and of the socioeconomic status/SES/of the family on the child's success in school and on certain personality characteristics. The urban sample covered the children of professional, qualified and unqualified workers from large and small towns. The rural sample consists of 50% peasant and 50% semi-peasant families from two areas which differ in the proportion of peasant and semi-peasant population. This cross-sectional study consists of pupils from the 4th grade/10-year-olds/ and 8th grade/14-year-olds/. The size and the level urbanisation of our towns did not significantly influence the pupils' achievement test scores and their personality characteristics. The pupils from peasant and semi-peasant areas also differ little or not at all in these respects. We found large differences between urban children of qualified and unqualified workers on one hand and rural children on the other as regards achievement test scores, intellectual abilities and occupational and educational aspirations. The school can not compensate for these shortcomings due to the underdeveloped rural environment. In towns, we found relatively large SES group differences in achievement test scores, intellectual abilities, occupational and educational aspirations. The differences in other personality characteristics are smaller or do not exist. SES group differences are somewhat reduced when the groups are formed of equally intelligent children. We found only small differences or none at all with regard to the sex.